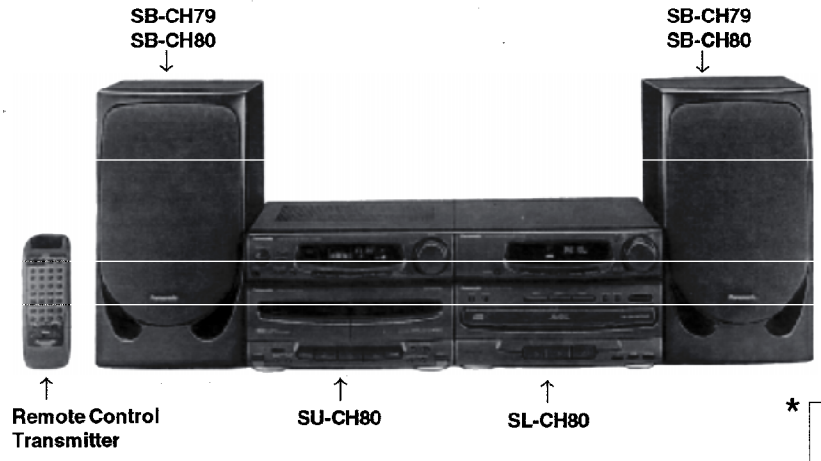
ORDER NO. MD9404036C8

Service Manual

* DOLBY B NR

Cassette Deck/Amplifier

SU-CH80



(The configuration of the speakers differs according to the area.)

Colour

(K) . . . Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	
(EG)	Germany and Italy	
(GN)	Oceania	

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Because of unique interconnecting cables, when a component requires service , send or bring in the entire system.

TAPE DECK : AR300 MECHANISM SERIES

SPECIFICATIONS\ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ

ACCESSORIES\ПРИНАДЛЕЖНОСТИ

TERMINAL GUIDE OF ICs, TRANSISTORS & DIODES\ЦОКОЛЕВКА МИКРОСХЕМ, ТРАНЗИСТОРОВ И ДИОДОВ

SCHEMATIC DIAGRAMS\ПРИНЦИПИАЛЬНЫЕ СХЕМЫ

TERMINAL FUNCTION OF ICs \ФУНКЦИОНАЛЬНОЕ НАЗНАЧЕНИЕ ВЫВОДОВ МИКРОСХЕМ

MEASUREMENTS AND ADJUSTMENTS\ИЗМЕРЕНИЯ И РЕГУЛИРОВКИ

SELF-DIAGNOSTIC MODE\РЕЖИМ САМОТЕСТИРОВАНИЯ

GENERAL INSPECTION\ПРОВЕРКА РАБОТОСПОСОБНОСТИ УЗЛОВ КОМПЛЕКСА

WIRING CONNECTION DIAGRAM\СХЕМА СОЕДИНЕНИЙ

BLOCK DIAGRAM\БЛОК-СХЕМА

MECHANISM PARTS LOCATION\РАСПОЛОЖЕНИЕ МЕХАНИЧЕСКИХ ЧАСТЕЙ

MECHANISM PARTS LIST\СПИСОК МЕХАНИЧЕСКИХ ЧАСТЕЙ

CABINET PARTS LOCATION\РАСПОЛОЖЕНИЕ ЧАСТЕЙ КОРПУСА

REPLACEMENT PARTS LIST\СПИСОК ЗАПАСНЫХ ЧАСТЕЙ

RESISTORS & CAPACITORS\РЕЗИСТОРЫ И КОНДЕНСАТОРЫ

PACKING MATERIALS AND ACCESSORIES\УПАКОВОЧНЫЕ МАТЕРИАЛЫ И ПРИНАДЛЕЖНОСТИ

Panasonic

■ SPECIFICATIONS

■ AMPLIFIER SECTION

1 kHz continuous power output	
both channels driven	2 x 35 W (THD 1%, 6Ω)
PMPO (for Oceania area only)	400 W (THD 10%, 6Ω)
Total harmonic distortion	
half power at 1 kHz	0.05% (6Ω)
Frequency response	
AUX	52 Hz – 20 kHz (– 3 dB)
Input sensitivity and impedance	
AUX	250 mV/22 kΩ
Graphic equalizer (Preset GE)	± 10 dB
	(100 Hz, 250 Hz, 1 kHz, 3.3 kHz, 12.5 kHz)
Load impedance	6Ω

■ CASSETTE DECK SECTION

Track system	4 track, 2 channel
Heads	
Playback	Solid permalloy head (Rotary head)
Record/playback	Solid permalloy head (Rotary head)
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias, 100 kHz
Erase system	AC erase, 100 kHz
Tape speed	4.8 cm/s
Frequency response	
NORMAL	30 Hz – 14 kHz (+3 dB, – 6 dB)
CrO_2	30 Hz – 15 kHz (+3 dB, – 6 dB)
S/N (CrO_2 type tape)	
Dolby NR off	52 dB (A-WTD)
Dolby NR on	61 dB (CCIR)
Wow and flutter	0.1% (WRMS)
Fast forward and rewind time	
	Approx. 110 seconds with C-60 cassette tape

■ GENERAL

Power consumption	130 W
Power supply	AC 50Hz, 230 – 240 V
Dimensions (W x H xD)	270 x 184.4 x 361.4 mm
Weight	6.3 kg

Note :
1. Specifications are subject to change without notice.
2. Weight and dimensions are approximate.
3. Total harmonic distortion is measured by the digital spectrum analyzer.

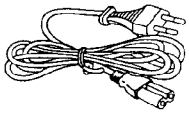
System	Tuner/Compact Disc Changer	Cassette Deck/Amplifier	Speakers
SC-CH80 E	SD-CH80 E		* SB-CH80 E
	SL-CH80 E	SU-CH80 E	
SC-CH80 EB	SD-CH80 EB		
	SL-CH80 E	SU-CH80 EB	
SC-CH80 EG	SD-CH80 EG		
	SL-CH80 EG	SU-CH80 EG	
SC-CH80 GN	SL-CH80 GN	SU-CH80 GN	SB-CH79 P

* Made in PAES

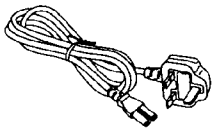
■ ACCESSORIES

☐ AC power supply cord. . . . . 1 pc.

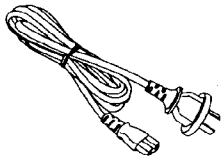
(For E, EG areas : RJA0019-2K)



(For EB area : VJA0733)

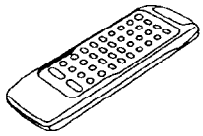


(For GN area : RJA0036-K)

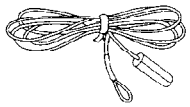


☐ Flat Cable. . . . . 1 pc.
(REX0581)

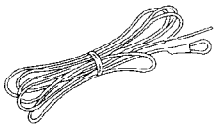
☐ Remote control transmitter. . . . . 1 pc.
(EUR642181)



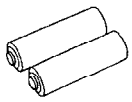
☐ FM indoor antenna. . . . . 1 pc.
(For E, EB & EG areas : SSA270)



(For GN area : SSA272)



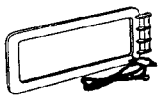
☐ Remote control batteries. . . . . 2 pcs.
(R03, UM-4, AAA)

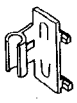


☐ AM loop antenna. . . . . 1 pc.
(SLA9Z5T)

☐ Antenna holder. . . . . 1 pc.
(RMN0244)

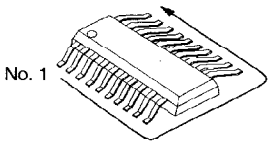
☐ Screw. . . . . 1 pc.
(XTV3+12AFZ)





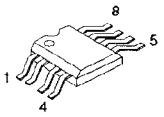
☐ Attachment plug. . . . . 1 pc.
(For EB area only : SJP9009)

■ TERMINAL GUIDE OF ICs, TRANSISTORS & DIODES

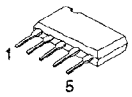


BU2040F-E2	16 Pin
BU4066BF-E2	14 Pin
CXA1102M-T4	16 Pin
LA5608M-TE-L	14 Pin
M51167BFP-E1	36 Pin

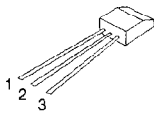
BA4558FDXE2

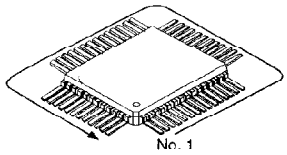


BA7755A



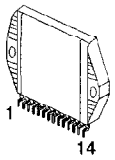
DN6851ALB



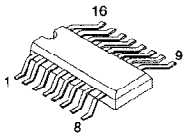


M38173M6272	80 Pin
M62408FP	100 Pin

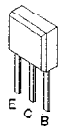
SVI3101D



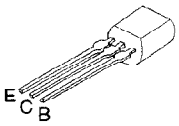
UPD4052BG-E2



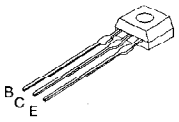
2SC2784FTA
2SD1450STA



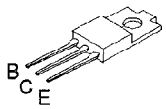
2SA564RTA
2SB621ARTA
2SB621RTA
2SD965RTA



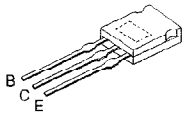
2SC2785FTA
2SD1020HTA



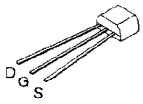
2SB1185E
2SD1273P
2SD1762E



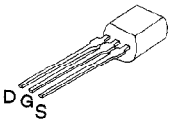
2SD2037ETA

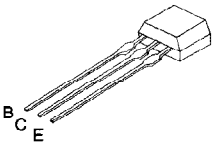


2SJ40CDTA
2SJ40CTA
2SK381CTA



2SK301QTA

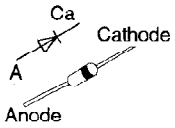




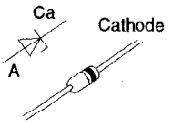
2SA933SSTA
2SC1740SLNET
2SC1740SLNST
2SC1740SSTA
RVTDTA114EST
RVTDTA114TST
RVTDTA124EST
RVTDTA143XST

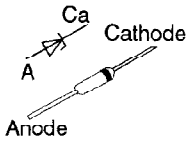
RVTDTA144TST
RVTDTC114TST
RVTDTC124EST
RVTDTC144EST
RVTDTC144TST

1SS291TA
MA29WATA
RVD1SS133TA



MA4300HTA

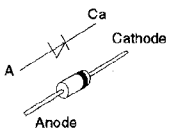




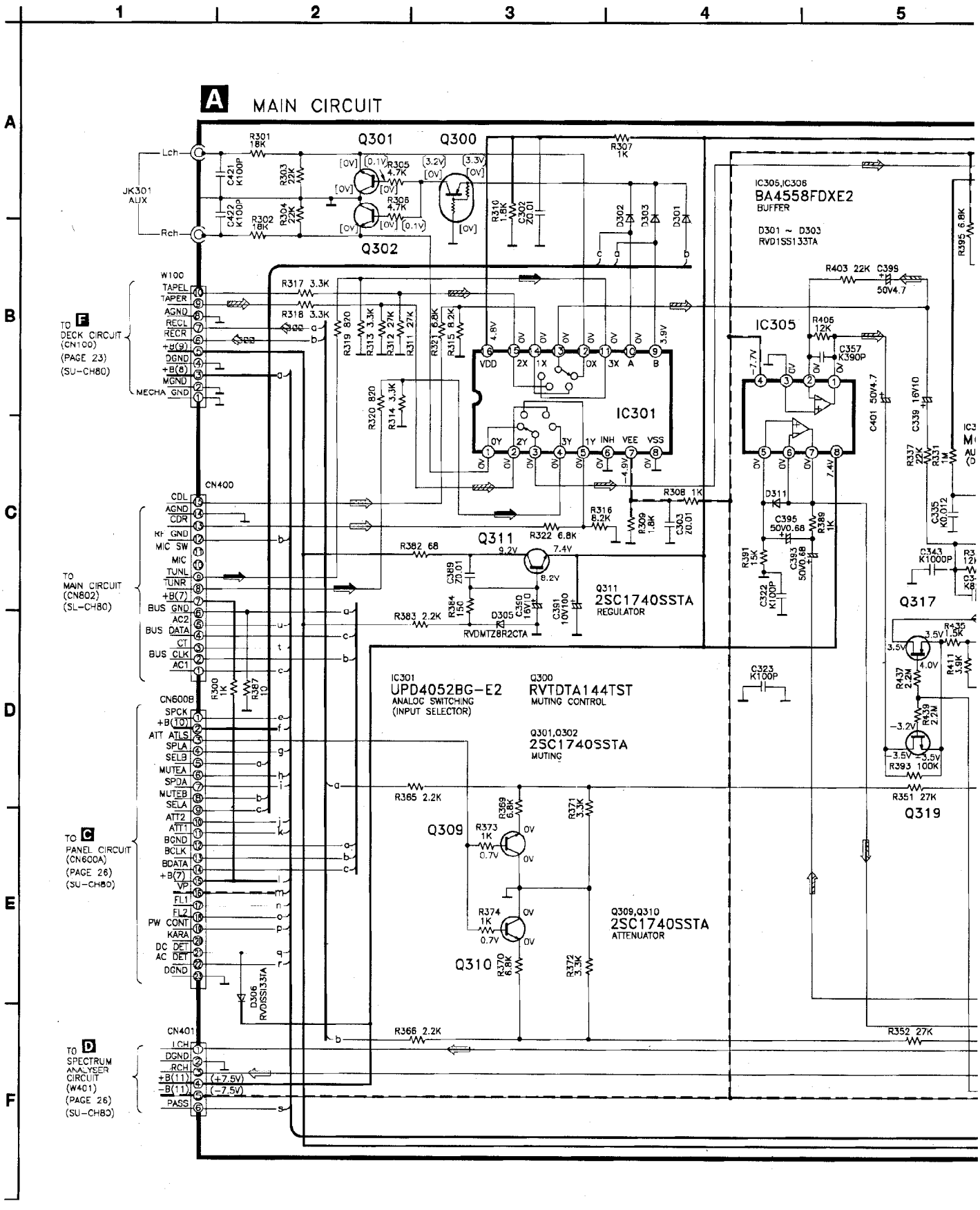
RVDMTZ10BTA
RVDMTZ15CTA
RVDMTZ3R6BTA
RVDMTZ4R7BTA
RVDMTZ5R1BTA
RVDMTZ6R2ATA
RVDMTZ6R8ATA
RVDMTZ6R8BTA

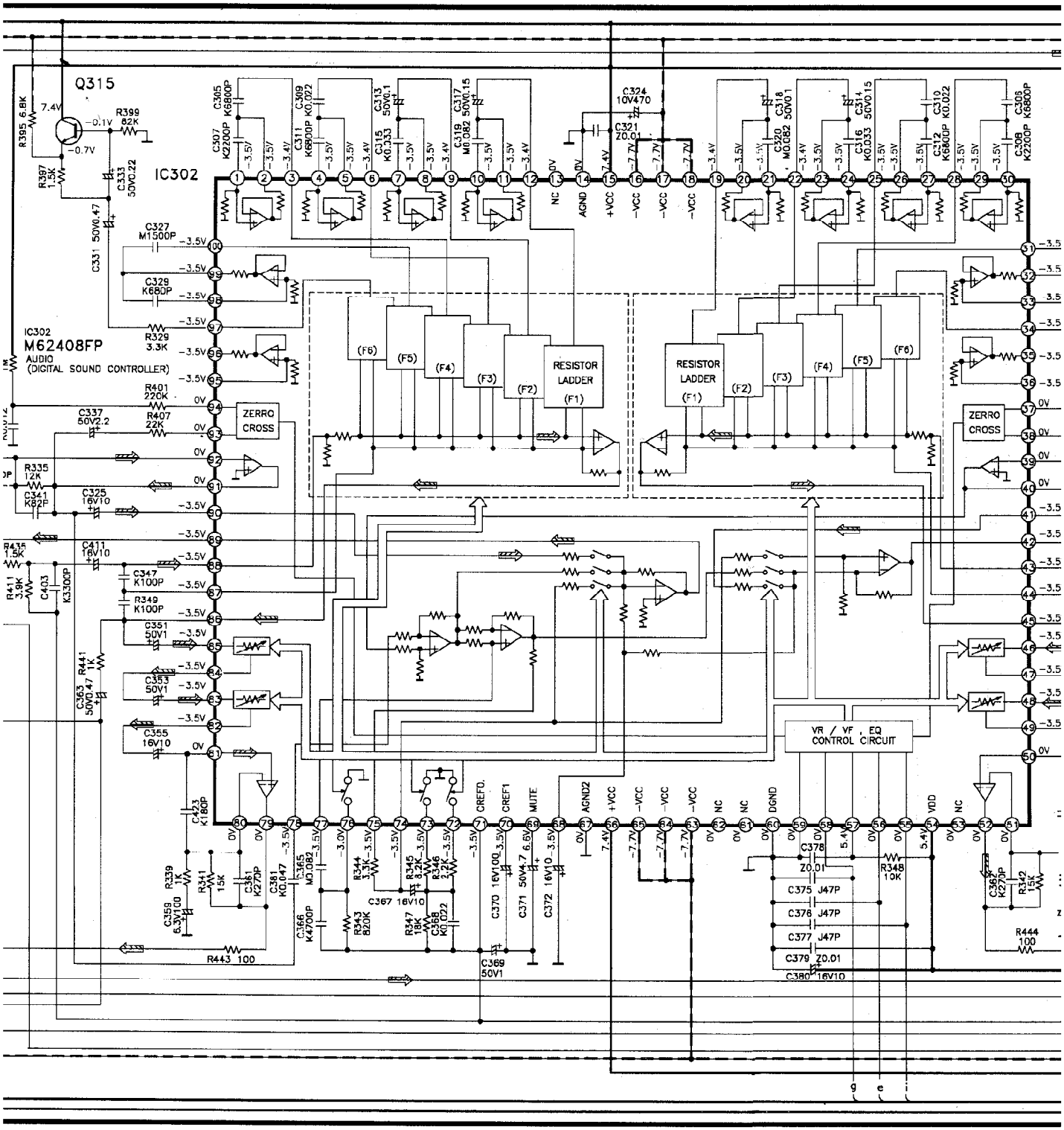
RVDMTZ8R2CTA

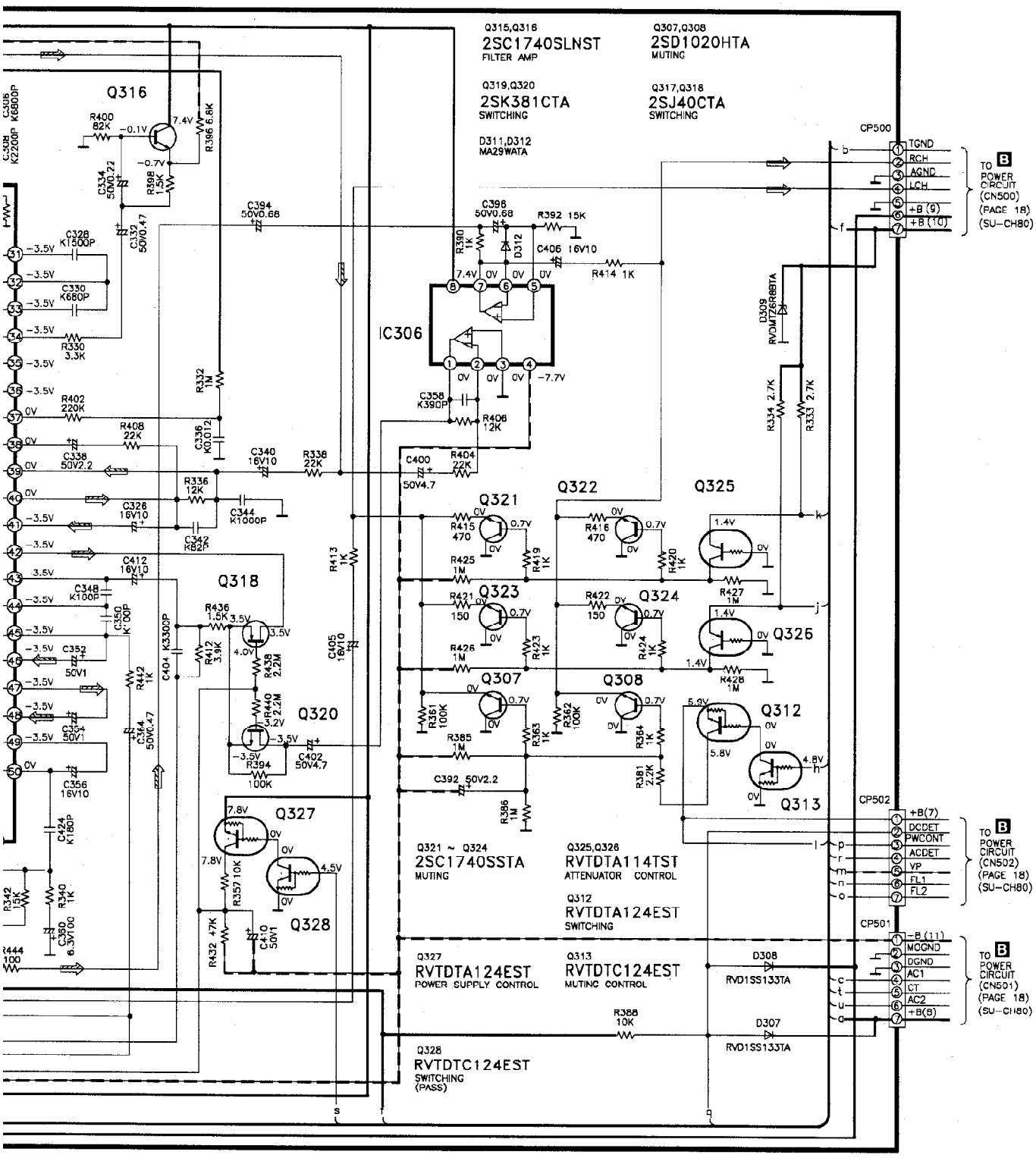
1D3E
1N5402BM21



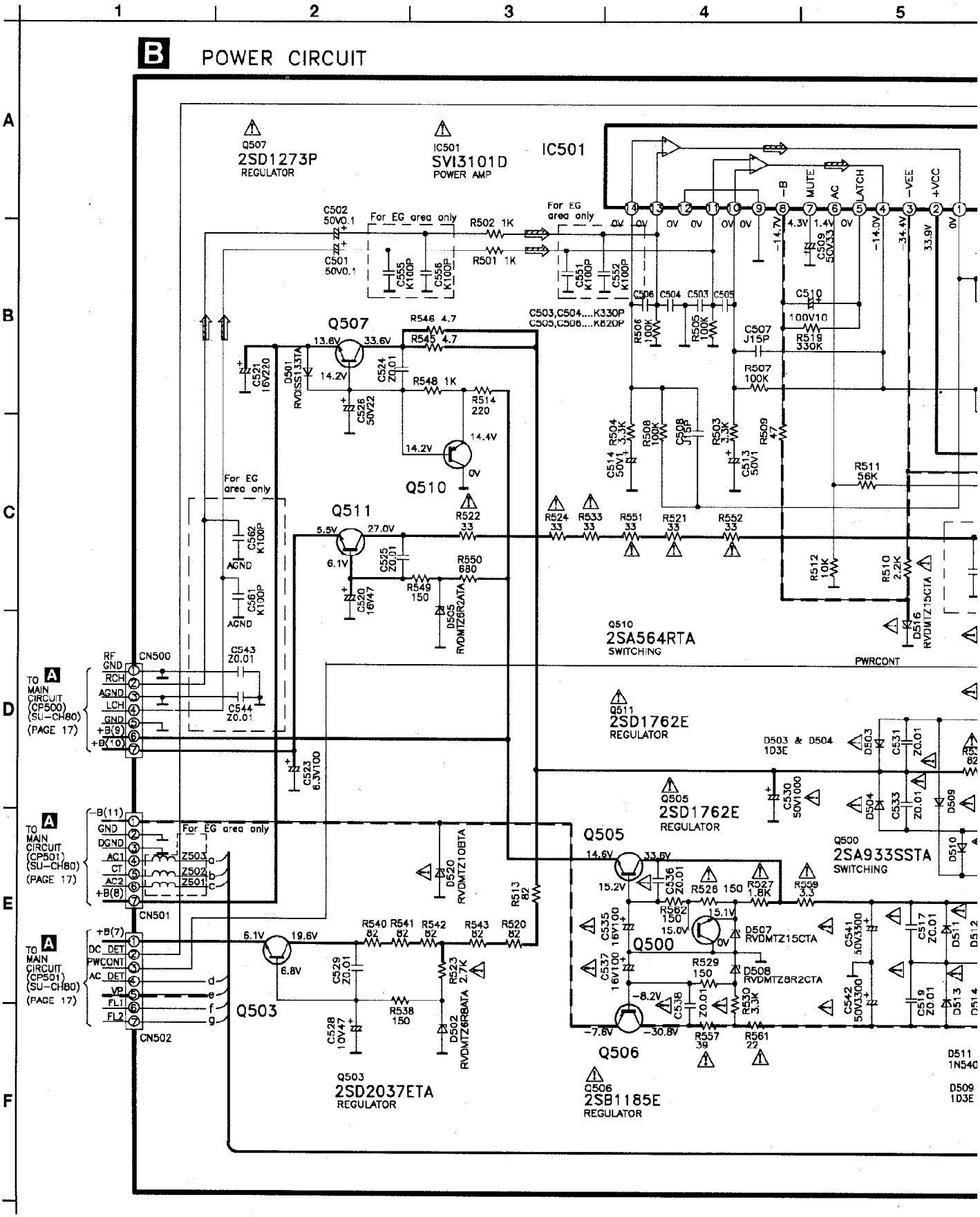
■ SCHEMATIC DIAGRAM

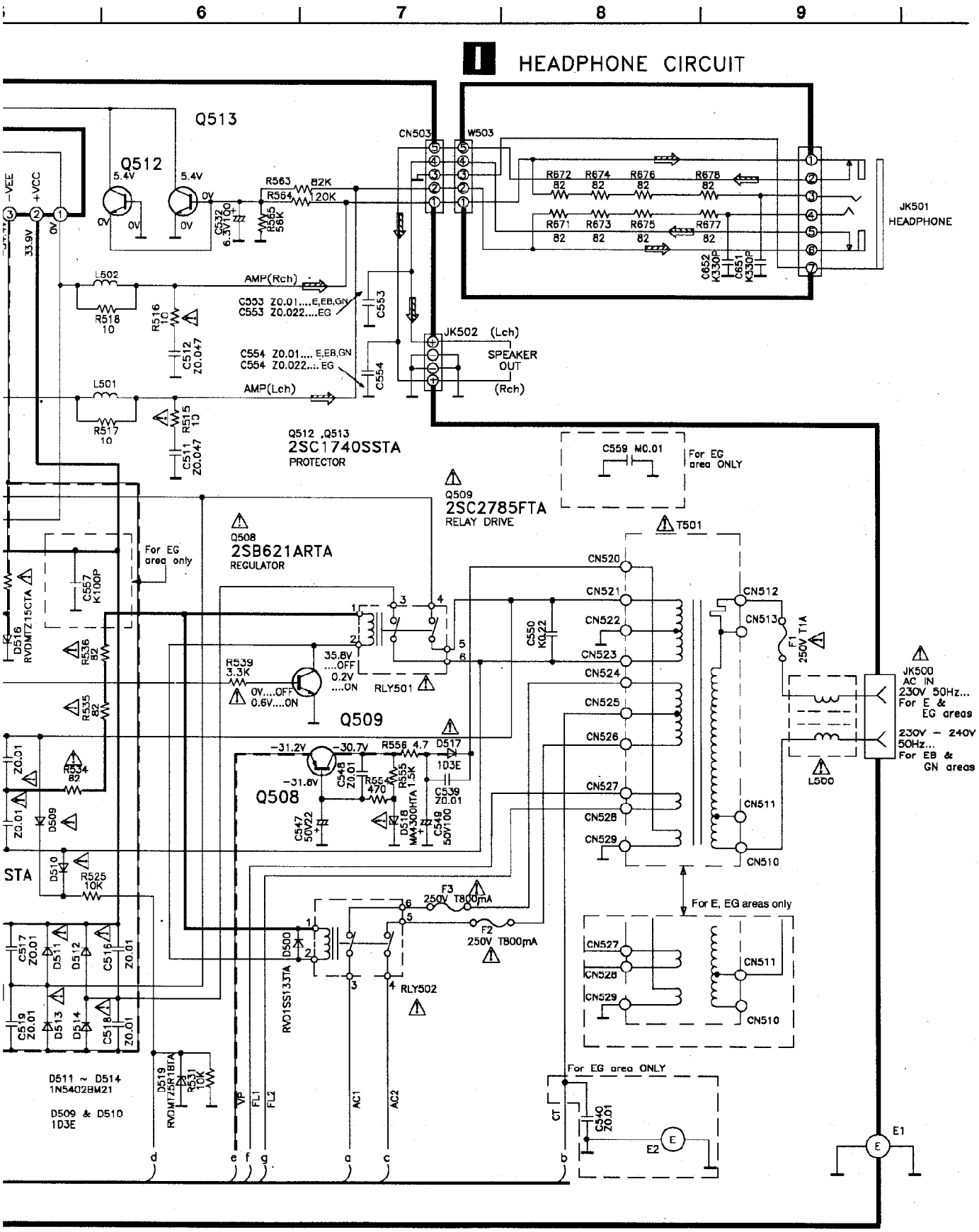



Q315
IC302
M62408FP
AUDIO
(DIGITAL SOUND CONTROLLER)
ZERRO CROSS
RESISTOR LADDER
VR / VF , EQ CONTROL CIRCUIT
NC
AGND
+VCC
-VCC
AGND2
CREFD.
CREF1
MUTE
DGND
VDD

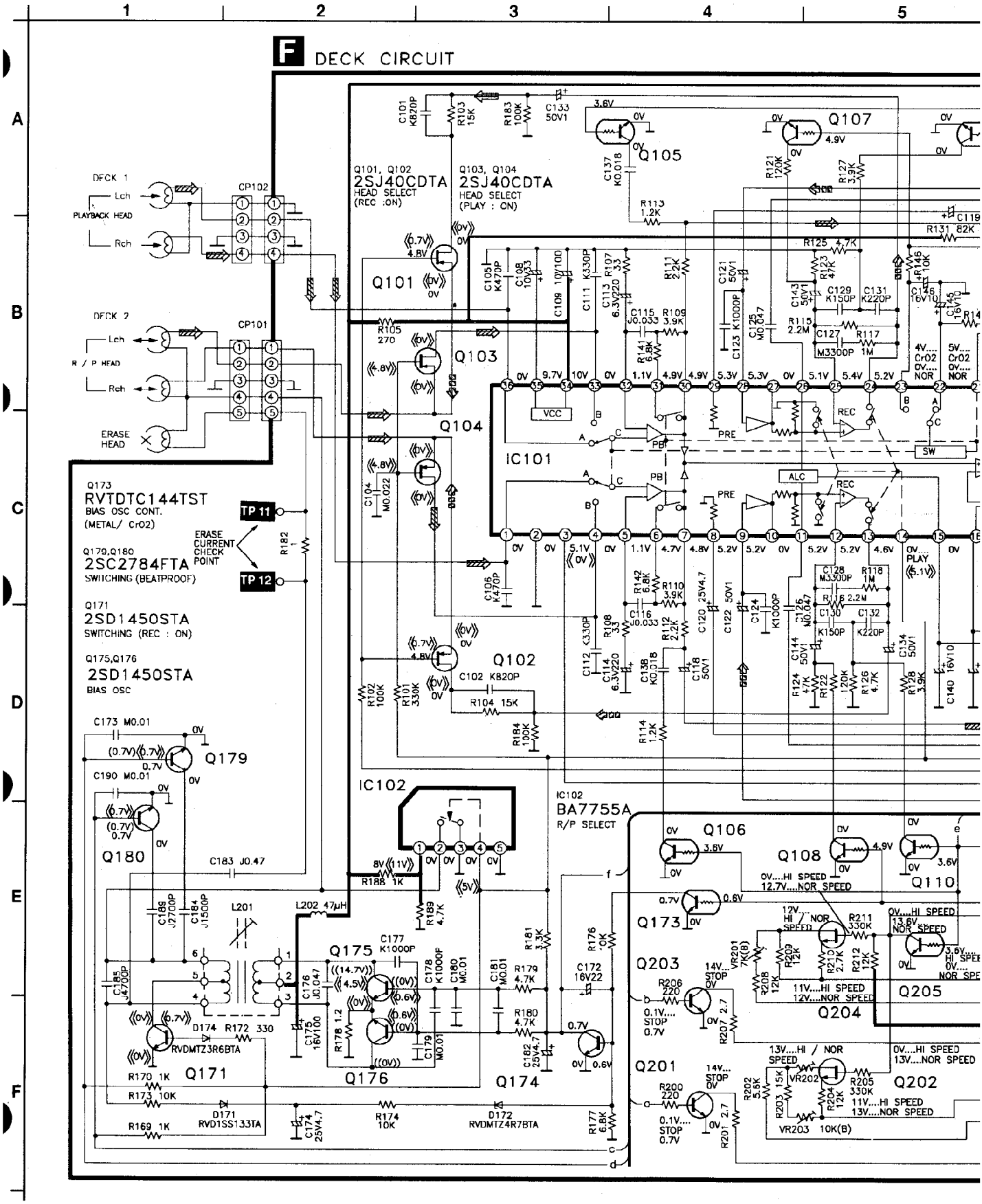

Q315,Q316
2SC1740SLNST
FILTER AMP
Q307,Q308
2SD1020HTA
MUTING
Q319,Q320
2SK381CTA
SWITCHING
Q317,Q318
2SJ40CTA
SWITCHING
D311,D312
MA29WATA
Q316
IC306
Q321
Q322
Q325
Q323
Q324
Q326
Q307
Q308
Q312
Q313
Q318
Q320
Q327
Q328
CP500
TGND
RCH
AGND
LCH
+B (9)
+B (10)
TO B POWER CIRCUIT (CN500) (PAGE 18) (SU-CH80)
CP502
+B(7)
DCDET
PWCONT
ACDET
VP
FL1
FL2
TO B POWER CIRCUIT (CN502) (PAGE 18) (SU-CH80)
CP501
-B (11)
MGND
DGND
AC1
CT
AC2
+B(8)
TO B POWER CIRCUIT (CN501) (PAGE 18) (SU-CH80)
Q321 ~ Q324
2SC1740SSTA
MUTING
Q325,Q326
RVTDTA114TST
ATTENUATOR CONTROL
Q312
RVTDTA124EST
SWITCHING
Q327
RVTDTA124EST
POWER SUPPLY CONTROL
Q313
RVTDTC124EST
MUTING CONTROL
Q328
RVTDTC124EST
SWITCHING
(PASS)
D308
RVD1SS133TA
D307
RVD1SS133TA

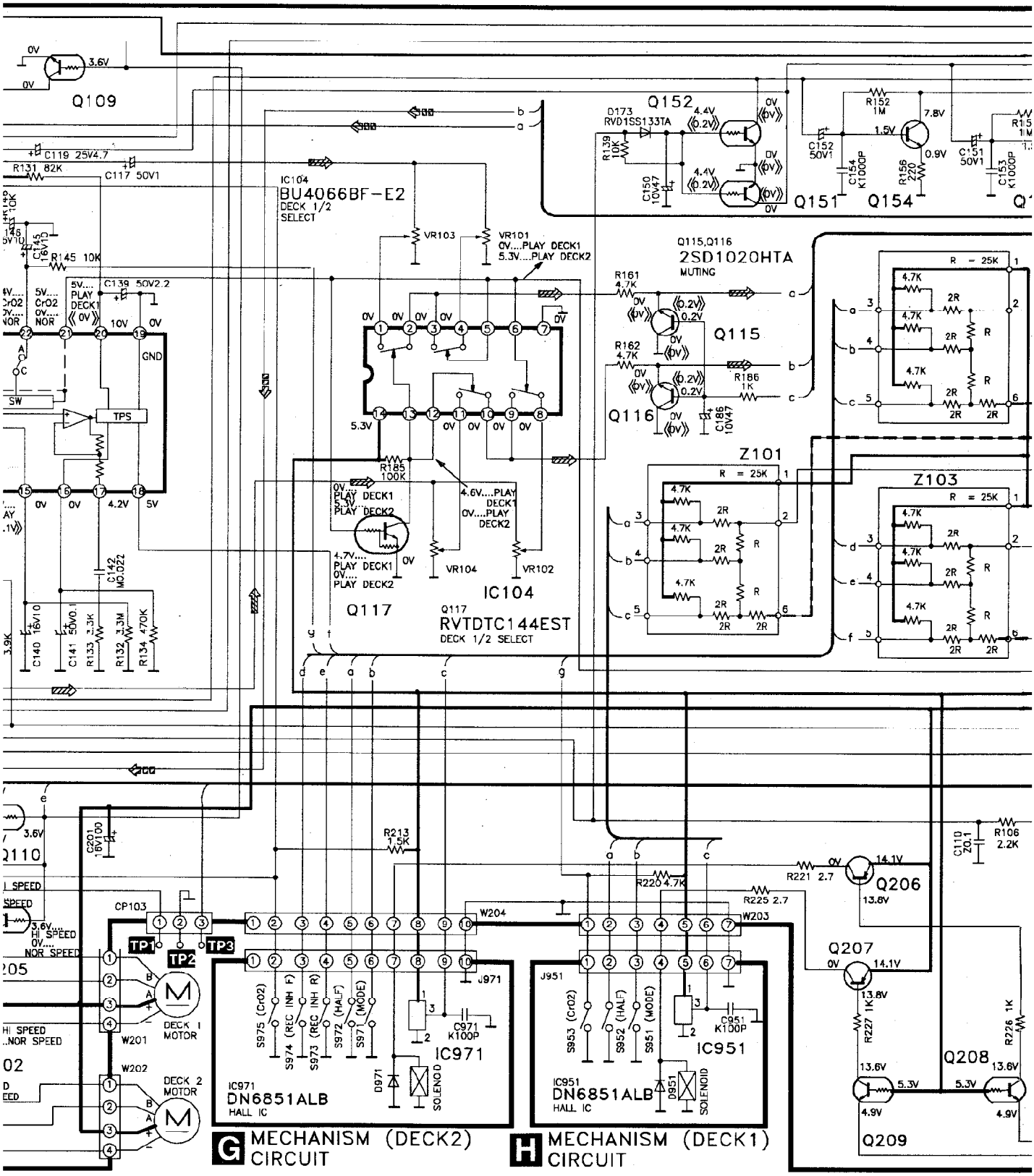
■ SCHEMATIC DIAGRAM

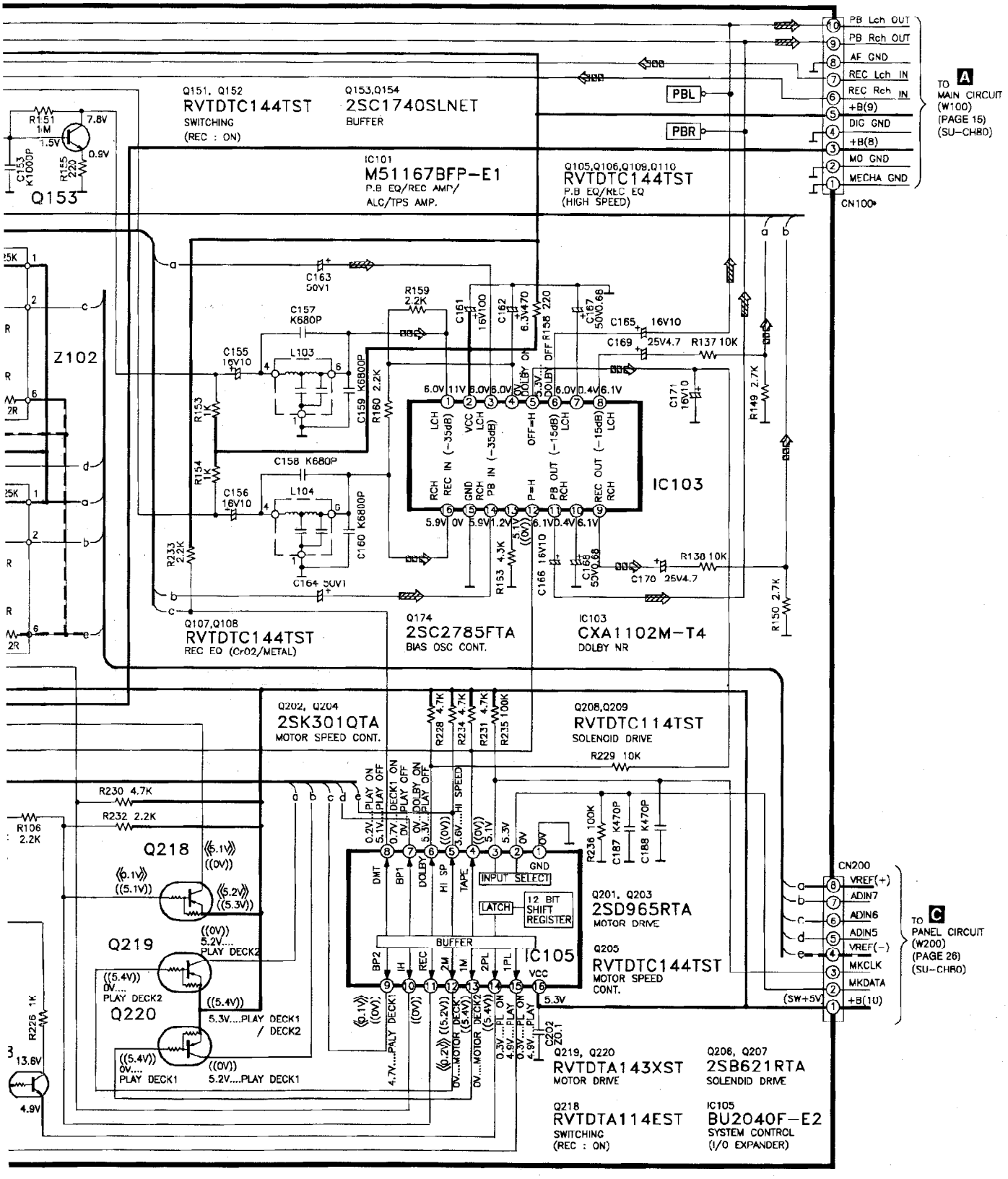



6
7
8
9
HEADPHONE CIRCUIT
Q513
Q512
5.4V
5.4V
0V
0V
0V
0V
-VEE
+VCC
33.9V
R563 82K
R564 20K
CN503
W503
R672 82
R674 82
R676 82
R678 82
R671 82
R673 82
R675 82
R677 82
JK501
HEADPHONE
C652 K330P
C651 K330P
L502
AMP(Rch)
R518 10
R516 10
C512 Z0.047
C553 Z0.01....E,EB,GN
C553 Z0.022....EG
C553
JK502 (Lch)
SPEAKER OUT
(Rch)
C554 Z0.01...., E,EB,GN
C554 Z0.022....EG
C554
L501
AMP(Lch)
R517 10
R515 10
C511 Z0.047
Q512 ,Q513
2SC1740SSTA
PROTECTOR
C559 M0.01
For EG area ONLY
Q509
2SC2785FTA
RELAY DRIVE
T501
Q508
2SB621ARTA
REGULATOR
For EG area only
D516 RVDMTZ15CTA
C557 K100P
R536 82
R535 82
R539 3.3K
35.8V ....OFF
0.2V ....ON
RLY501
0V....OFF
0.6V....ON
Q509
CN520
CN521
CN522
CN523
CN524
CN525
CN526
CN527
CN528
CN529
CN512
CN513
CN511
CN510
C550 K0.22
F1 250V T1A
JK500
AC IN
230V 50Hz...
For E & EG areas
230V ~ 240V
50Hz...
For EB & GN areas
L500
-31.2V
-30.7V
R556 4.7
D517 1D3E
-31.6V
Q508
C548 Z0.01
R554 470
R555 1.5K
C539 Z0.01
C547 50V22
D518 MA4300HTA
C549 50V100
Z0.01 R534 82
Z0.01 D509
D510
STA
R525 10K
F3 250V T800mA
F2 250V T800mA
D500
RVD1SS133TA
RLY502
For E, EG areas only
C517 Z0.01
D511
D512
C516 Z0.01
C519 Z0.01
D513
D514
C518 Z0.01
D511 ~ D514
1N5402BM21
D509 & D510
1D3E
D519 RVDMTZ5R1BTA
R531 10K
For EG area ONLY
C540 Z0.01
E2
E1
Vp
FL1
FL2
AC1
AC2
GT
a
b
c
d
e
f
g

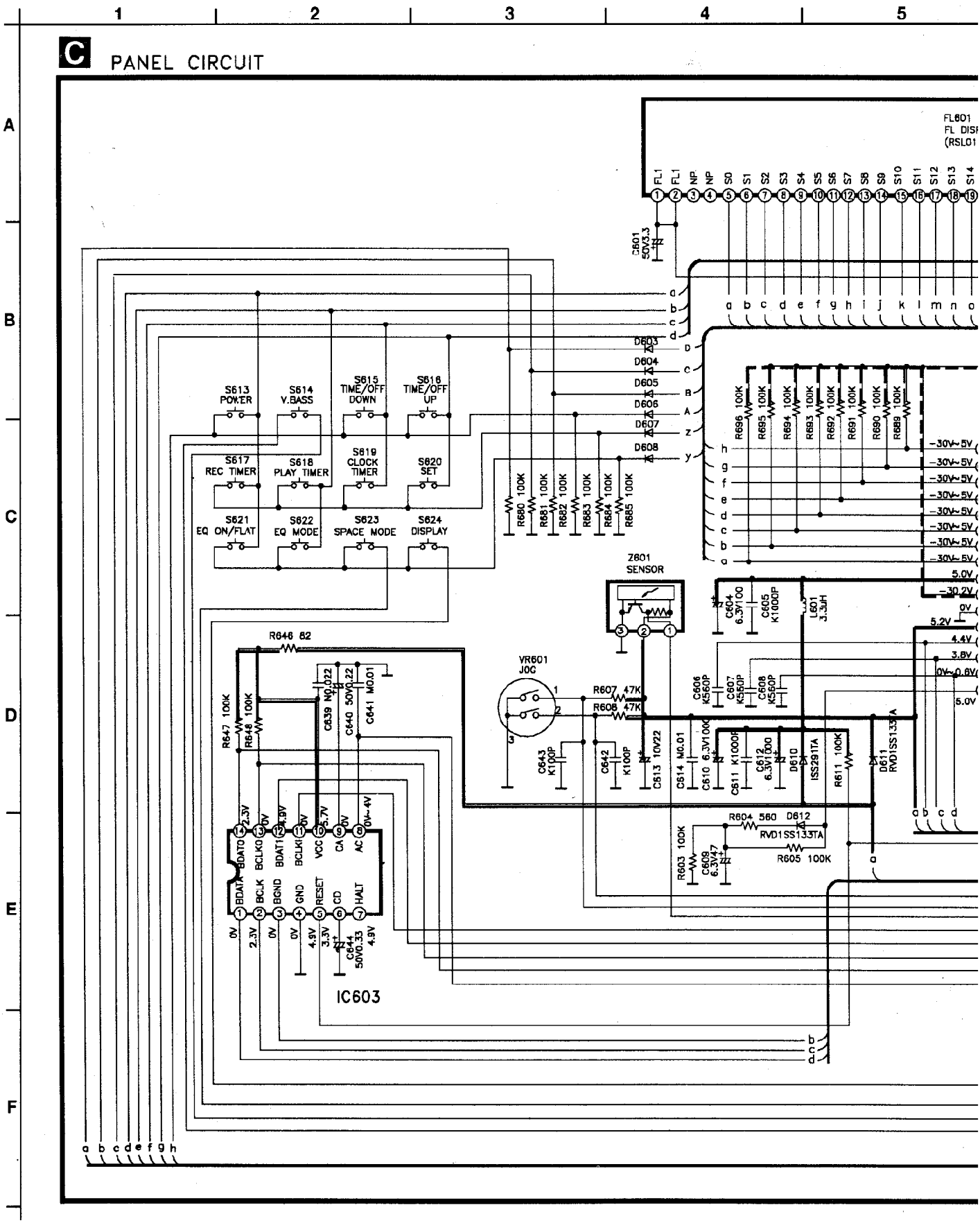
■ SCHEMATIC DIAGRAM

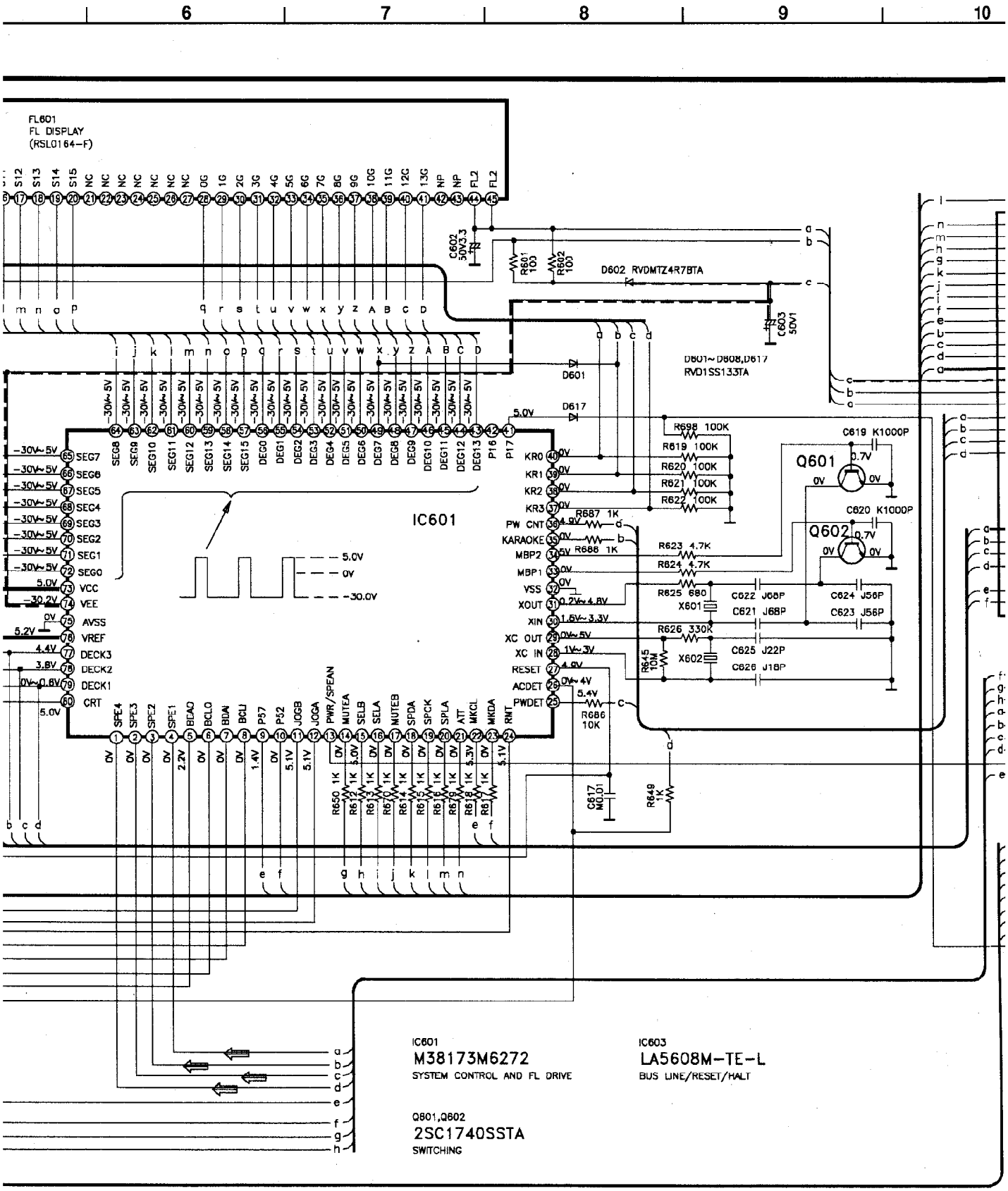


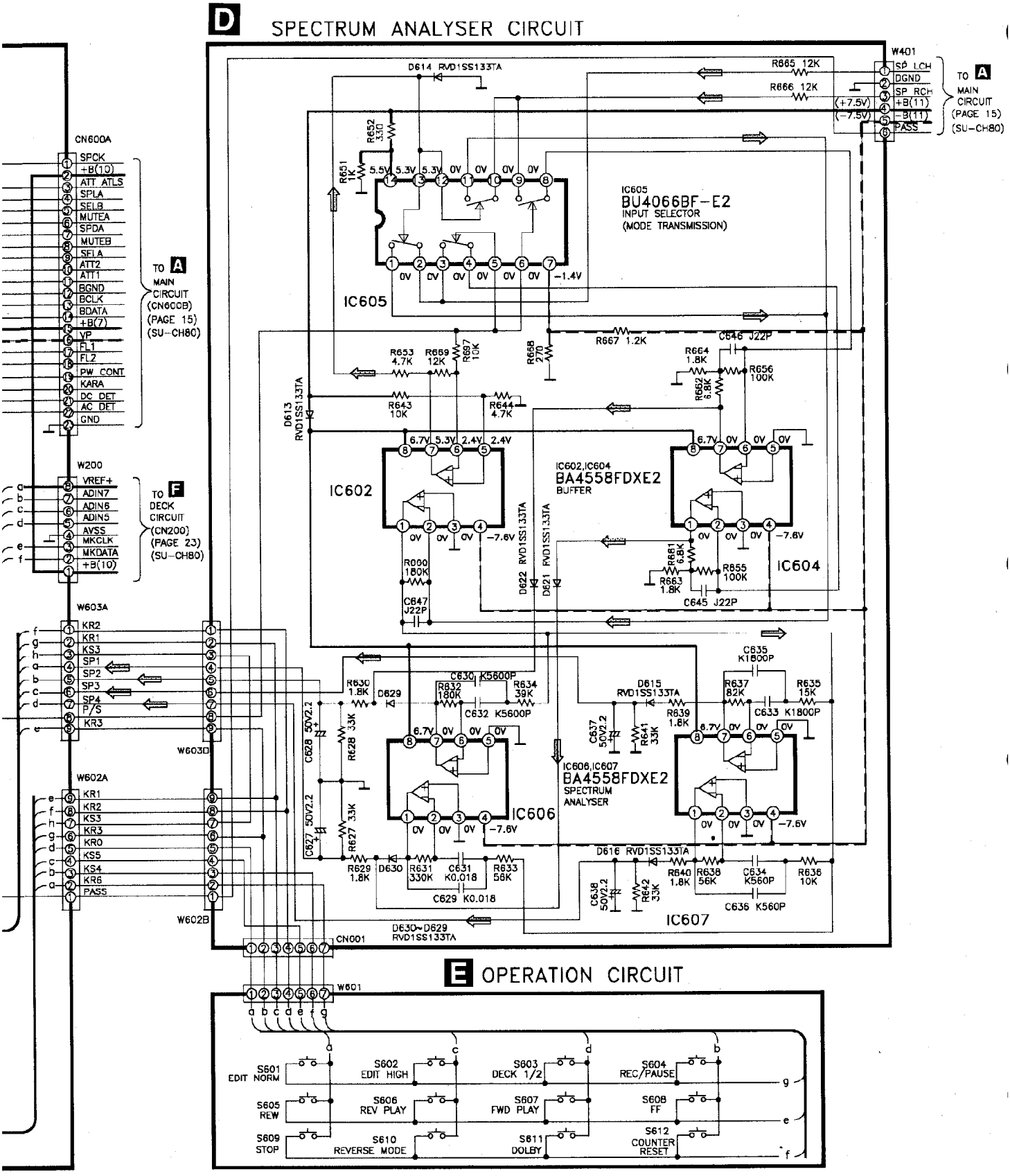

Q109
Q152
Q151
Q154
IC104
BU4066BF-E2
DECK 1/2
SELECT
Q115,Q116
2SD1020HTA
MUTING
Q115
Q116
Z101
Z103
R = 25K
TPS
Q117
RVTDTC144EST
DECK 1/2 SELECT
IC104
VR103
VR101
0V....PLAY DECK1
5.3V....PLAY DECK2
VR104
VR102
R185 100K
C142 M0.022
C119 25V4.7
R131 82K
C117 50V1
R145 10K
C139 50V2.2
C140 16V10
C141 50V0.1
R133 3.3K
R132 3.3M
R134 470K
C145 16V10
R139 10K
C150 10V47
D173 RVD1SS133TA
R152 1M
C152 50V1
C154 K1000P
R156 220
C151 50V1
C153 K1000P
R161 4.7K
R162 4.7K
R186 1K
C186 10V47
C201 16V100
R213 1.5K
R220 4.7K
R221 2.7
R225 2.7
C110 20.1
R106 2.2K
Q206
Q207
Q208
Q209
R227 1K
R226 1K
CP103
TP1
TP2
TP3
W201
W202
W203
W204
DECK 1 MOTOR
DECK 2 MOTOR
J971
J951
S975 (CrO2)
S974 (REC INH F)
S973 (REC INH R)
S972 (HALF)
S971 (MODE)
S953 (CrO2)
S952 (HALF)
S951 (MODE)
C971 K100P
C951 K100P
IC971
IC951
IC971 DN6851ALB HALL IC
IC951 DN6851ALB HALL IC
D971
D951
SOLENOID
HI SPEED
NOR SPEED
G MECHANISM (DECK2) CIRCUIT
H MECHANISM (DECK1) CIRCUIT


PB Lch OUT
PB Rch OUT
AF GND
REC Lch IN
REC Rch IN
+B(9)
DIG GND
+B(8)
MO GND
MECHA GND
CN100
TO A MAIN CIRCUIT (W100) (PAGE 15) (SU-CH80)
PBL
PBR
Q151, Q152
RVTDTC144TST
SWITCHING
(REC : ON)
Q153,Q154
2SC1740SLNET
BUFFER
Q153
IC101
M51167BFP-E1
P.B EQ/REC AMP/
ALC/TPS AMP.
Q105,Q106,Q109,Q110
RVTDTC144TST
P.B EQ/REC EQ
(HIGH SPEED)
Z102
IC103
Q107,Q108
RVTDTC144TST
REC EQ (CrO2/METAL)
Q174
2SC2785FTA
BIAS OSC CONT.
IC103
CXA1102M-T4
DOLBY NR
Q202, Q204
2SK301QTA
MOTOR SPEED CONT.
Q208,Q209
RVTDTC114TST
SOLENOID DRIVE
Q218
Q219
Q220
Q201, Q203
2SD965RTA
MOTOR DRIVE
Q205
RVTDTC144TST
MOTOR SPEED CONT.
IC105
BUFFER
INPUT SELECT
LATCH
12 BIT SHIFT REGISTER
Q219, Q220
RVTDTA143XST
MOTOR DRIVE
Q206, Q207
2SB621RTA
SOLENOID DRIVE
Q218
RVTDTA114EST
SWITCHING
(REC : ON)
IC105
BU2040F-E2
SYSTEM CONTROL
(I/O EXPANDER)
CN200
TO C PANEL CIRCUIT (W200) (PAGE 26) (SU-CH80)

■ SCHEMATIC DIAGRAM




6
7
8
9
10
FL601
FL DISPLAY
(RSL0164-F)
IC601
M38173M6272
SYSTEM CONTROL AND FL DRIVE
IC603
LA5608M-TE-L
BUS LINE/RESET/HALT
Q601,Q602
2SC1740SSTA
SWITCHING
D602 RVDMTZ4R7BTA
D601~D608,D617
RVD1SS133TA
Q601
Q602
X601
X602


D SPECTRUM ANALYSER CIRCUIT
CN600A
SPCK
+B(10)
ATT ATLS
SPLA
SELB
MUTEA
SPDA
MUTEB
SELA
ATT2
ATT1
BGND
BCLK
BDATA
+B(7)
VP
FL1
FL2
PW CONT
KARA
DC DET
AC DET
GND
TO A MAIN CIRCUIT (CN600B) (PAGE 15) (SU-CH80)
W200
VREF+
ADIN7
ADIN6
ADIN5
AVSS
MKCLK
MKDATA
+B(10)
TO F DECK CIRCUIT (CN200) (PAGE 23) (SU-CH80)
W603A
KR2
KR1
KS3
SP1
SP2
SP3
SP4
P/S
KR3
W603D
W602A
KR1
KR2
KS3
KR3
KR0
KS5
KS4
KR6
PASS
W602B
CN601
W401
SP LCH
DGND
SP RCH
+B(11)
-B(11)
PASS
TO A MAIN CIRCUIT (PAGE 15) (SU-CH80)
D614 RVD1SS133TA
R665 12K
R666 12K
(+7.5V)
(-7.5V)
R652 330
R651 1K
IC605
BU4066BF-E2
INPUT SELECTOR
(MODE TRANSMISSION)
R667 1.2K
C646 J22P
R653 4.7K
R669 12K
R697 10K
R668 270
R664 1.8K
R656 100K
R662 6.8K
R643 10K
R644 4.7K
D613 RVD1SS133TA
IC602
IC602,IC604
BA4558FDXE2
BUFFER
IC604
R660 180K
C647 J22P
D622 RVD1SS133TA
D621 RVD1SS133TA
R661 6.8K
R655 100K
R663 1.8K
C645 J22P
C635 K1800P
R630 1.8K
D629
C630 K5600P
R632 180K
R634 39K
C632 K5600P
D615 RVD1SS133TA
R637 82K
R635 15K
C633 K1800P
R639 1.8K
C628 50V2.2
R628 3.3K
C637 50V2.2
R641 33K
IC606,IC607
BA4558FDXE2
SPECTRUM ANALYSER
IC606
C627 50V2.2
R627 3.3K
D616 RVD1SS133TA
R629 1.8K
D630
R631 330K
C631 K0.018
R633 56K
C629 K0.018
R640 1.8K
R638 56K
C634 K560P
R636 10K
C638 50V2.2
R642 33K
C636 K560P
IC607
D630~D629 RVD1SS133TA
E OPERATION CIRCUIT
W601
S601 EDIT NORM
S602 EDIT HIGH
S603 DECK 1/2
S604 REC/PAUSE
S605 REW
S606 REV PLAY
S607 FWD PLAY
S608 FF
S609 STOP
S610 REVERSE MODE
S611 DOLBY
S612 COUNTER RESET

■ TERMINAL FUNCTION OF IC'S

• IC601(M38173M6272)

Pin No.	Mark	I/O	Function
1	SPE4	I	Spectrum analyser control input
2	SPE3	I	Spectrum analyser control input
3	SPE2	I	Spectrum analyser control input
4	SPE1	I	Spectrum analyser control input
5	BDAO	O	Bus control data output
6	BCLO	O	Bus control clock output
7	BDAI	I	Bus control data input
8	BCLI	I	Bus control clock input
9	P57	O	ATT1 control signal
10	P52	O	ATT2 control signal
11	JOGB	I	JOG dial signal input
12	JOGA	I	JOG dial signal input
13	PWR/SPEAN	I	Power/spectrum analyser select signal input
14	MUTEA	O	AF muting signal output
15	SELB	O	Function select signal output
16	SELA	O	Function select signal output
17	MUTEB	O	Muting control output
18	SPDA	O	Signal processing data control output
19	SPCK	O	Signal processing clock signal output
20	SPLA	O	Signal processing latch signal output
21	ATT	O	Volume attenuator signal output
22	MKCL	O	Clock control for deck circuit
23	MKDA	O	Data output for deck circuit
24	RMT	I	Remote control pulse signal output
25	PWDET	I	Power on detection input
26	ACDET	I	Power down detection input
27	RESET	I	Microprocessor reset input
28	XC IN	I	Crystal oscillator input (32.768 kHz)

Pin No.	Mark	I/O	Function
29	XC OUT	O	Crystal oscillator output (32.768 kHz)
30	XIN	I	Ceramic oscillator input (4.19MHz)
31	XOUT	O	Ceramic oscillator output (4.19MHz)
32	VSS	—	GND
33	MBP1	O	Microprocessor beatproof 1 output
34	MBP2	O	Microprocessor beatproof 2 output
35	KARAOKE	—	GND
36	PW CNT	O	Power control signal output
37	KR3	I	Key return signal input
38	KR2	I	
39	KR1	I	
40	KR0	I	
41	P17	O	PASS control signal output
42	P16	—	Not used, open
43	DEG13	O	Digit drive signal for FL display
≀	≀		
56	DEG0		
57	SEG15	O	Segment drive signal for FL display
≀	≀		
72	SEG0		
73	VCC	—	+5V
74	VEE	—	–30V
75	AVSS	—	GND
76	VREF	O	Output reference voltage
77	DECK3	I/O	AD converter input (cass. mech sensor)
78	DECK2	I/O	
79	DECK1	I/O	
80	CRT	I/O	CR timer during backup

■ MEASUREMENTS AND ADJUSTMENTS

■ CASSETTE DECK SECTION

• Measurement Condition

- Reverse-mode selector switch : ⇆
- One touch tape edit : NORMAL
- Rec timer : OFF
- Dolby NR : OFF
- Make sure heads, capstan and pressure roller are clean.
- Judgeable room temperature 20 ± 5 °C (68 ± 9°F)

• Measuring instrument

- EVM (Electronic Voltmeter)
- Digital frequency counter

• Test tape

- Head azimuth adjustment (8 kHz, – 20dB); QZZCFM
- Tape speed adjustment (3 kHz, – 10 dB); QZZCWAT
- Playback gain adjustment (315 Hz, 0 dB); QZZCFM
- Normal reference blank tape; QZZCRA

• HEAD AZIMUTH ADJUSTMENT (DECK 1/2)

Caution :

- Please replace both azimuth adjustment screws (RHE5152ZB) and springs (RMB0331) used for to new ones simultaneously when readjusting the head azimuth. (Shown in Fig. 2)
  Even if you wish to readjust the head azimuth without replacing the screws and springs, a fine adjustment cannot be done because of the screw-locking bond adhered to the azimuth screw and spring.
- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
- If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (Shown in Fig.3)

1. Playback the azimuth adjustment portion (8 kHz, – 20dB) of the test tape (QZZCFM) in the forward play mode. Vary the azimuth adjusting screw until the output of the R-CH (PB OUT-R) are maximized.
2. Perform the same adjustment in the reverse play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

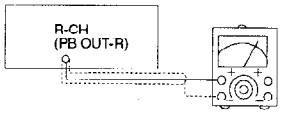


Fig. 1

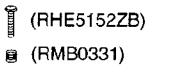


Fig.2

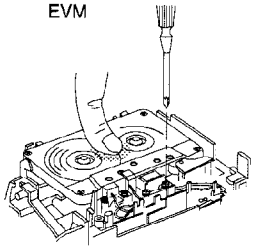


Fig. 3

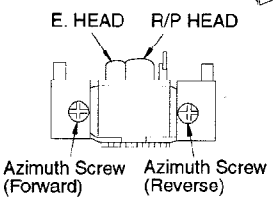


Fig. 4

• TAPE SPEED ADJUSTMENT (DECK1/2)

Normal speed (Standard value : 3000 ± 40)

1. Set the One touch tape edit button to "NORMAL" position.
2. Insert the test tape (QZZCWAT) to DECK 1 and playback (FWD side) the middle portion of it.
3. Adjust **VR201** (DECK1) for the output value shown below.

Adjustment target : 2995 ~ 3025 Hz (NORMAL speed)

4. Set the One touch tape edit button to "HIGH" mode.
5. Short-circuit between **TP1** and **TP2** . Playback (FWD side) the middle portion of test tape (QZZCWAT).
6. Assure so that the output from DECK 1 is within the standard value.

Standard value : 5100 ± 210 Hz (HIGH speed)

7. Insert the test tape (QZZCWAT) to DECK 2 and playback (FWD side) the middle portion of it.
8. Adjust **VR203** so that the output frequency of DECK 2 is within **± 40 Hz** of the value of the output frequency of DECk 1.
9. Disconnect the **TP1** and **TP2** . Set the One touch tape edit button to "NORMAL" mode and playback the test tape (QZZCWAT).
10. Adjust **VR202** (DECK 2) for the output value shown below.

Adjustment target : 2995 ~ 3025 Hz (NORMAL speed)

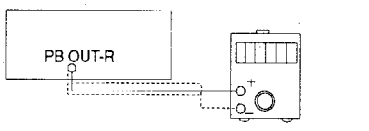


Fig. 5

• PLAYBACK GAIN ADJUSTMENT (DECK 1/2)

1. Playback the gain adjusted portion (315Hz, 0dB) of the test tape (QZZCFM).
2. Adjust **VR103** for DECK 2 L-CH (**VR104** for R-CH) and **VR101** for DECK 1 L-CH (**VR102** for R-CH) so that the output is within the standard value.

Standard value : 276 ± 30 mV

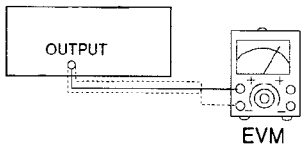


Fig. 6

OUTPUT	ALIGNMENT PARTS	FUNCTION
PB OUT-L	VR103	DECK 2 L-CH
PB OUT-R	VR104	DECK 2 R-CH
PB OUT-L	VR101	DECK 1 L-CH
PB OUT-R	VR102	DECK 1 R-CH

• BIAS FREQUENCY ADJUSTMENT (DECK 2)

1. Set the unit to "AUX" position.
2. Insert the Normal blank test tape (QZZCRA) into DECK 2 and set the unit to "RECORD" mode (use "REC PAUSE" key).
3. Adjust **L201** so that the output frequency is within the standard value.

Standard value : 98 ± 8 kHz

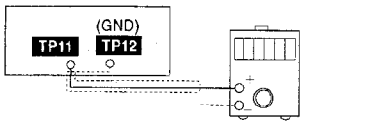
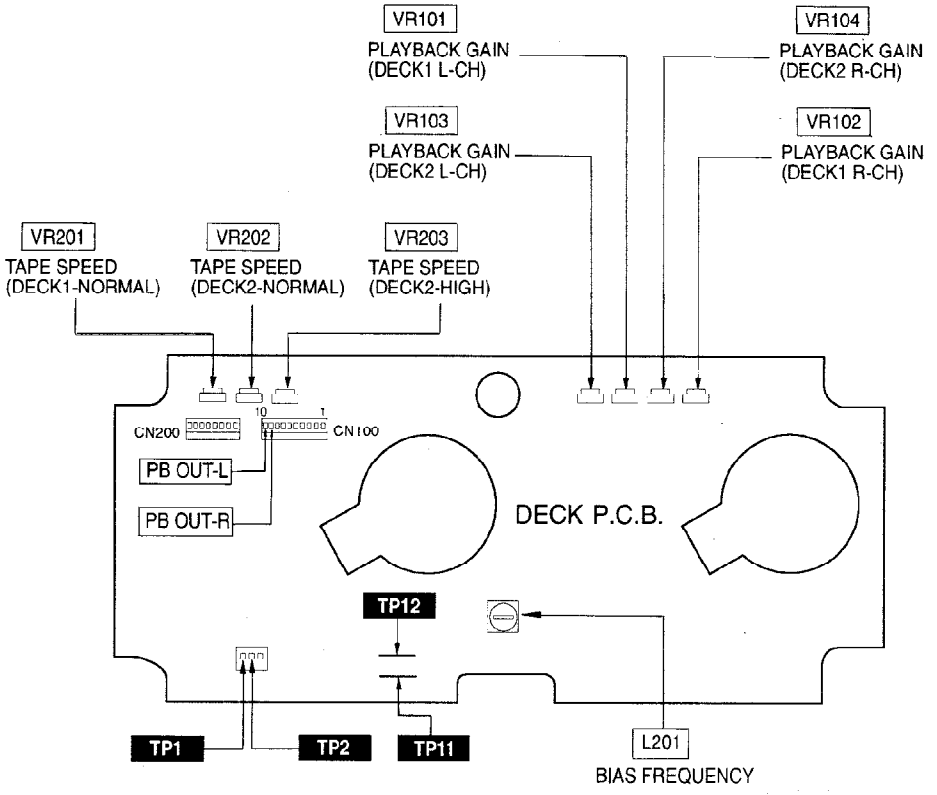


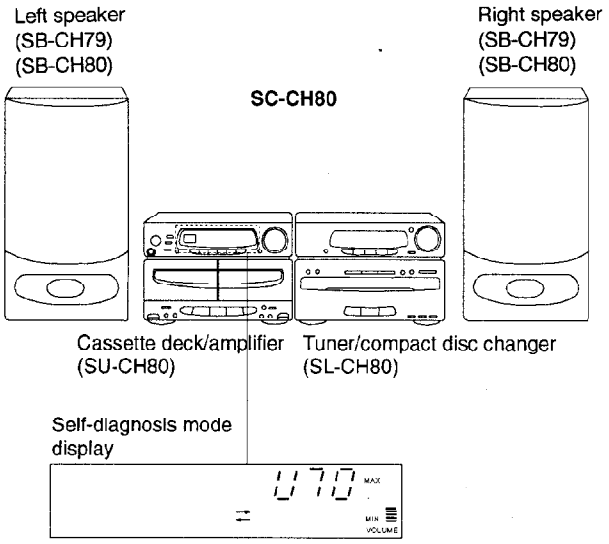
Fig. 7

■ ALIGNMENT POINTS



■ SELF-DIAGNOSIS MODE

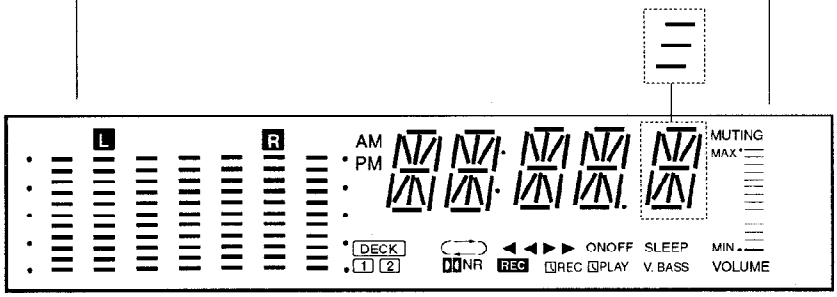
This unit has a self-diagnosis function that indicates when any faulty operation has taken place.

Display function	Display location
In self-diagnosis mode "F65" appears on the FL display for 3 seconds, then the operating power is switched off automatically and the clock appears on the display. If the power is switched on again, "F65" appears for further 3 seconds. "U70" appears on the FL display and it will remain on the display until remedy action has been taken.	

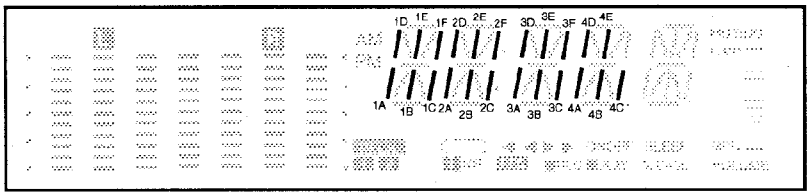
■ DISPLAY CONTENTS

Indication	Problem	Remedy
F65	If you attempt to switch on the power, it switches off again automatically. It is impossible to operate the unit. A defective speaker output chip is producing a DC voltage at one of the speaker terminals.	Check each speaker output chip and replace it if neccessary
U70	If you switch on the power, "U70" appears on the display. It is still possible to operate the unit but "U70" will remain on the display until remedy action has been taken. Not connection between the SU-CH60 and SL-CH80 units with Bus cable (REX0581).	Check connection between the SU-CH80 and SL-CH80 units.If not connected, switch off the power, use a bus cable (REX0581) to connect it back and switch on the power again.

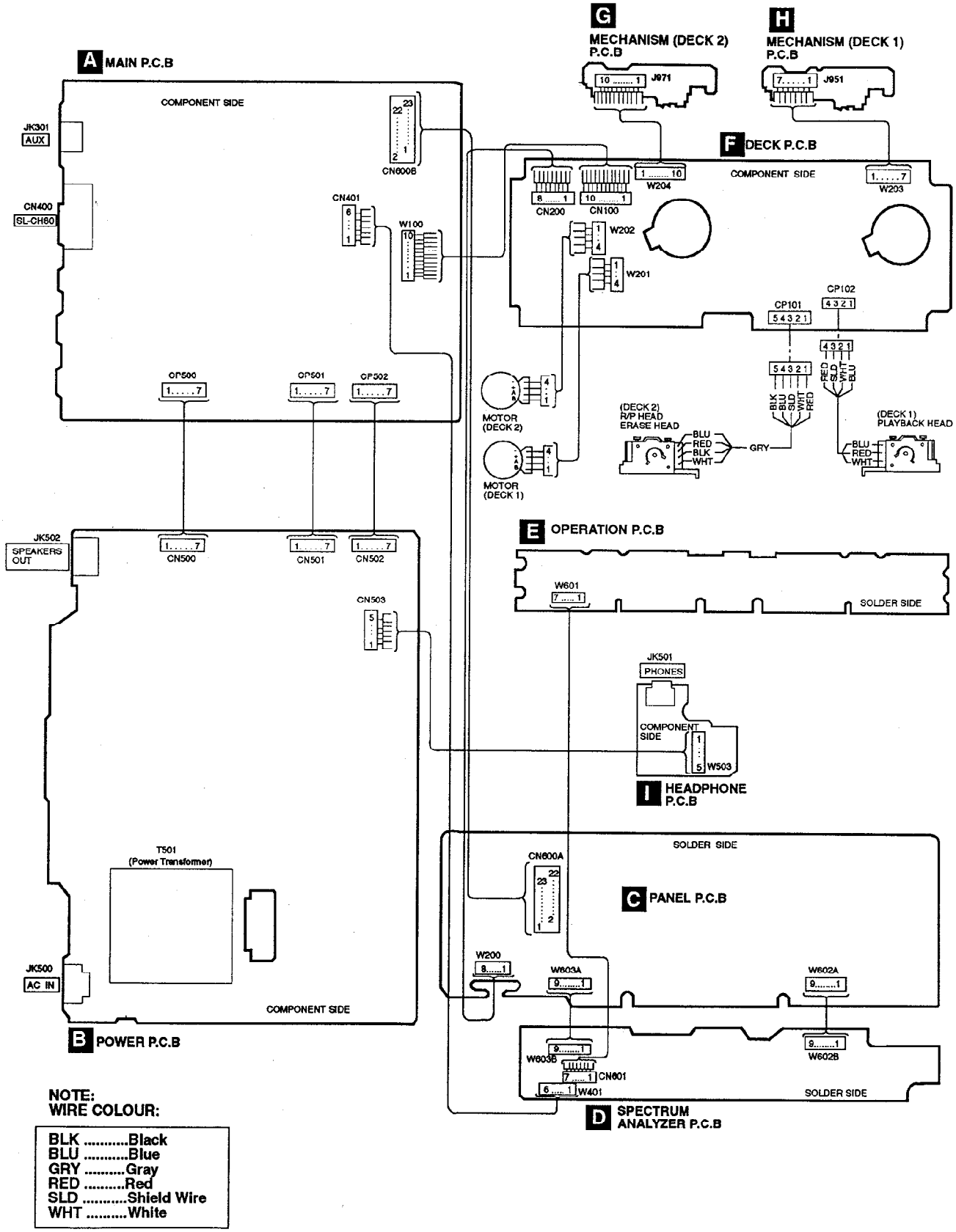
■ GENERAL INSPECTION

FUNCTION	CHECKING	REMARKS
1. To enter TEST MODE.	• Press the " ■ " (TAPE STOP) key on the SU-CH80 unit, then simultaneously press the (4) key followed by (7) key on the Remote Control Unit. 	• The first segment "≡" from the right side of FL display will be displayed when TEST MODE is entered.
2. To check for all connection and FL Display connection.	• Press the "7" key on the Remote Control Transmitter. • Press every key on the SU-CH80 unit one by one. • After all keys(23 keys) have been pressed, all segments of FL display will light up. • The chart below summarizes the Display segment corresponding to each key pressed.	• FL Display will black out. • FL Display will have its segment lighted up one by one.
4. To exit from TEST MODE.	• Press the Power key on the SU-CH80 unit, or press " ■ " (CD STOP) on the remote control transmitter, or pull out the Power Supply Plug. • Pull out the Power Supply Plug to set the "COLD START" from the above TEST MODE. (The memory will be set to the initial condition on the next AC power on.)	

Segment Light Up	Key Pressed (From SU-CH80 unit)	Segment Light Up	Key Pressed (From SU-CH80 unit)
1A	DECK1/2	1D	REC TIMER
1B	ONE TOUCH TAPE EDIT(NORMAL)	1E	PLAY TIMER
1C	ONE TOUCH TAPE EDIT(HIGH)	1F	CLOCK/TIMER
2A	◀◀ (TPS)	2D	SET
2B	◁	2E	TIME/EFFECT ▼
2C	□	2F	TIME/EFFECT ▲
3A	▷	3D	ON/FLAT
3B	▶▶ (TPS)	3E	EQ MODE
3C	DOLBY NR	3F	SPACE MODE
4A	REC PAUSE	4D	V BASS
4B	COUNTER RESET	4E	DISPLAY
4C	REVERSE MODE		



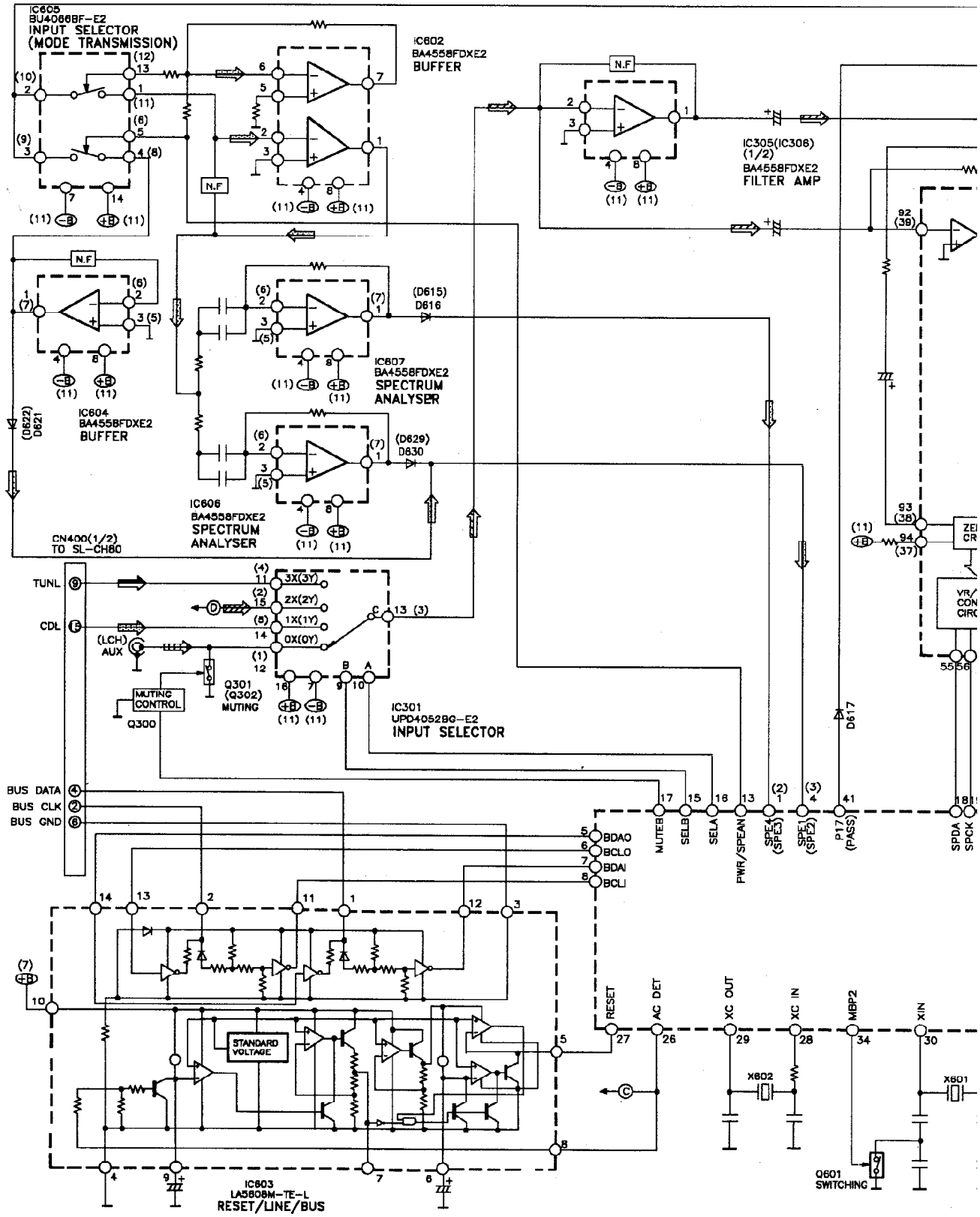
■ WIRING CONNECTION DIAGRAM

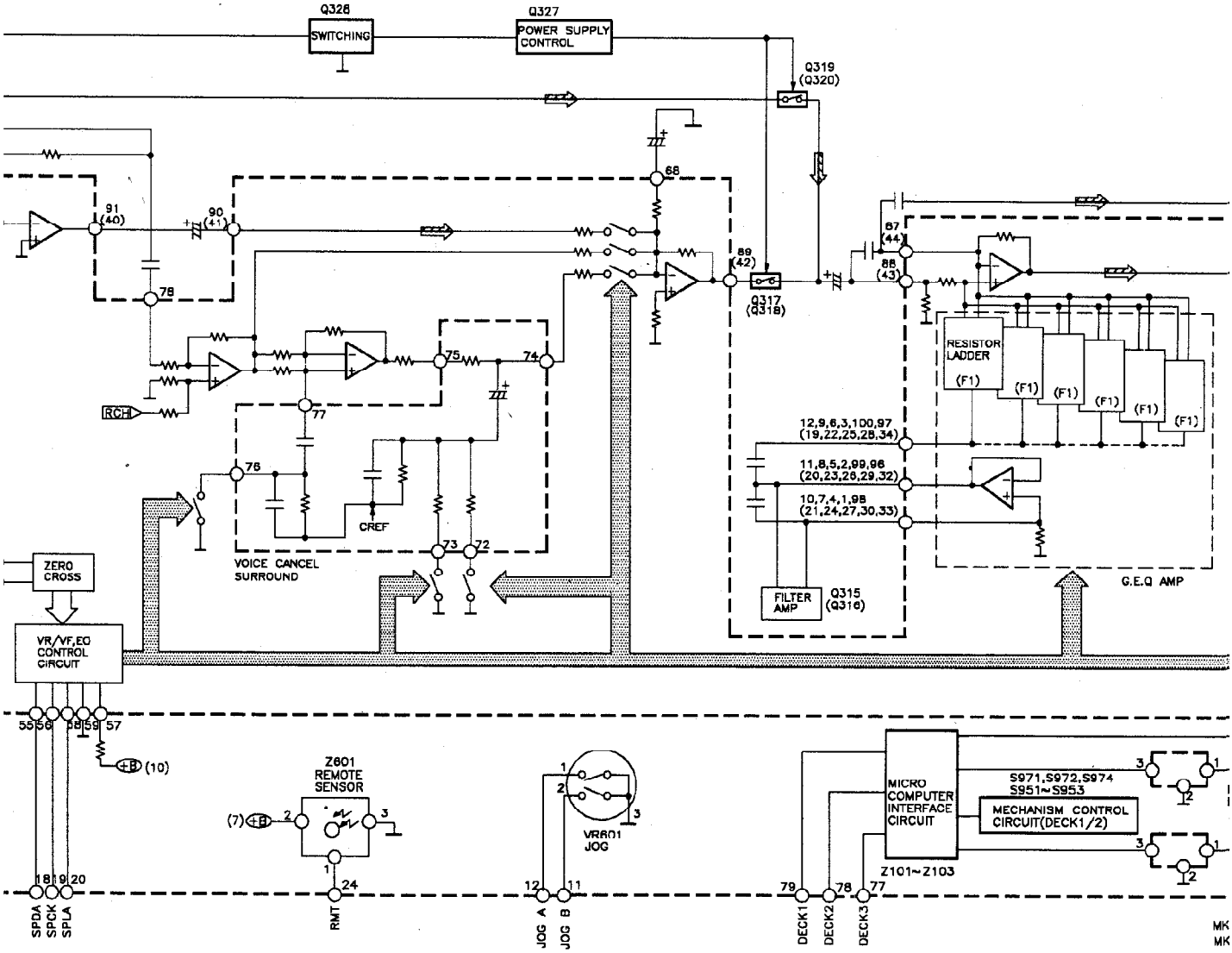


NOTE:
WIRE COLOUR:

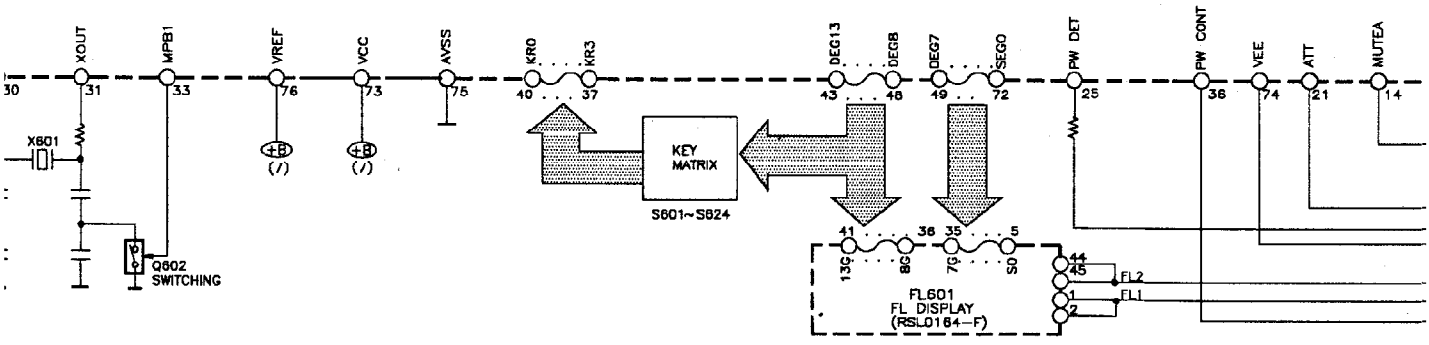
BLK	Black
BLU	Blue
GRY	Gray
RED	Red
SLD	Shield Wire
WHT	White

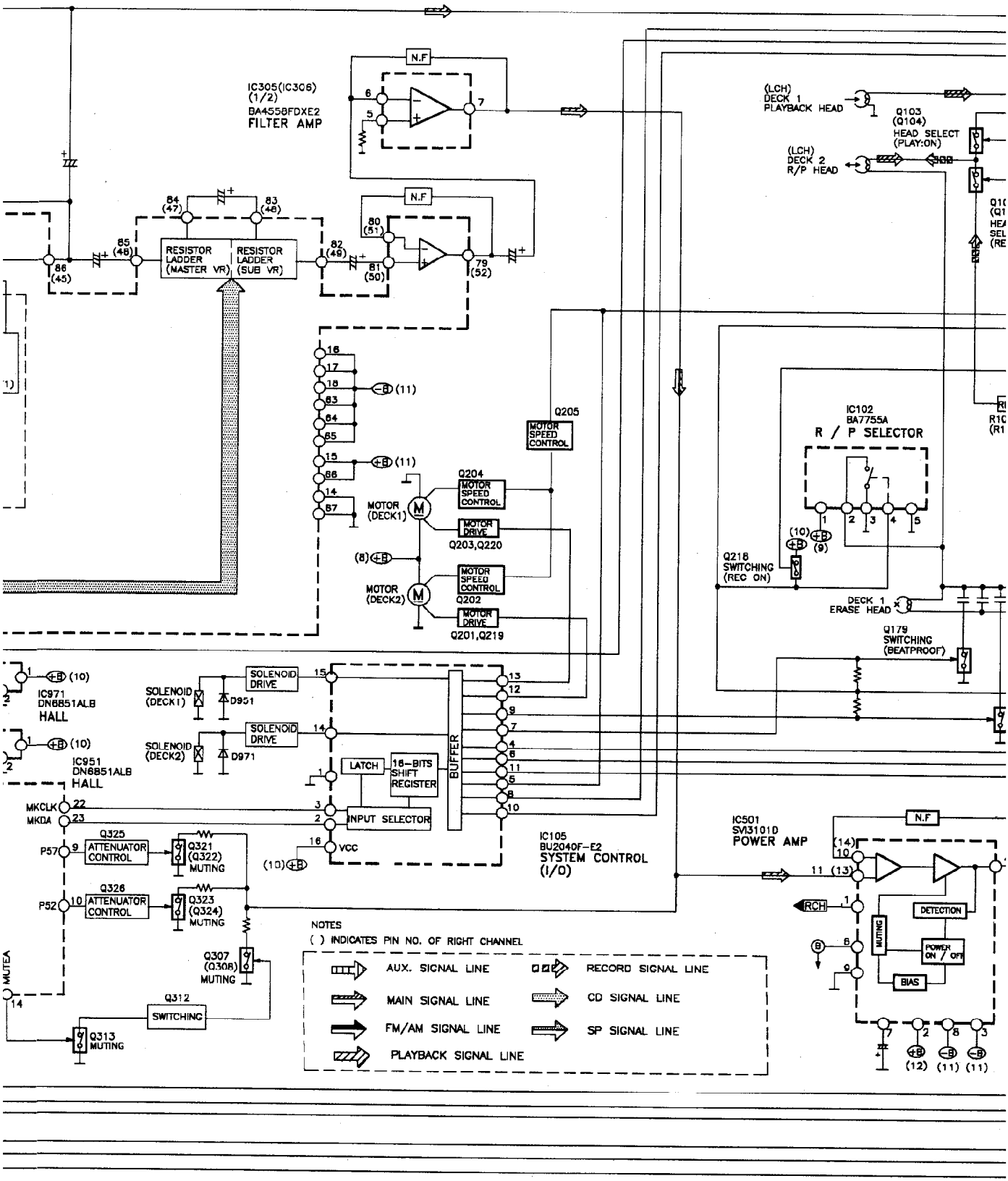
■ BLOCK DIAGRAM

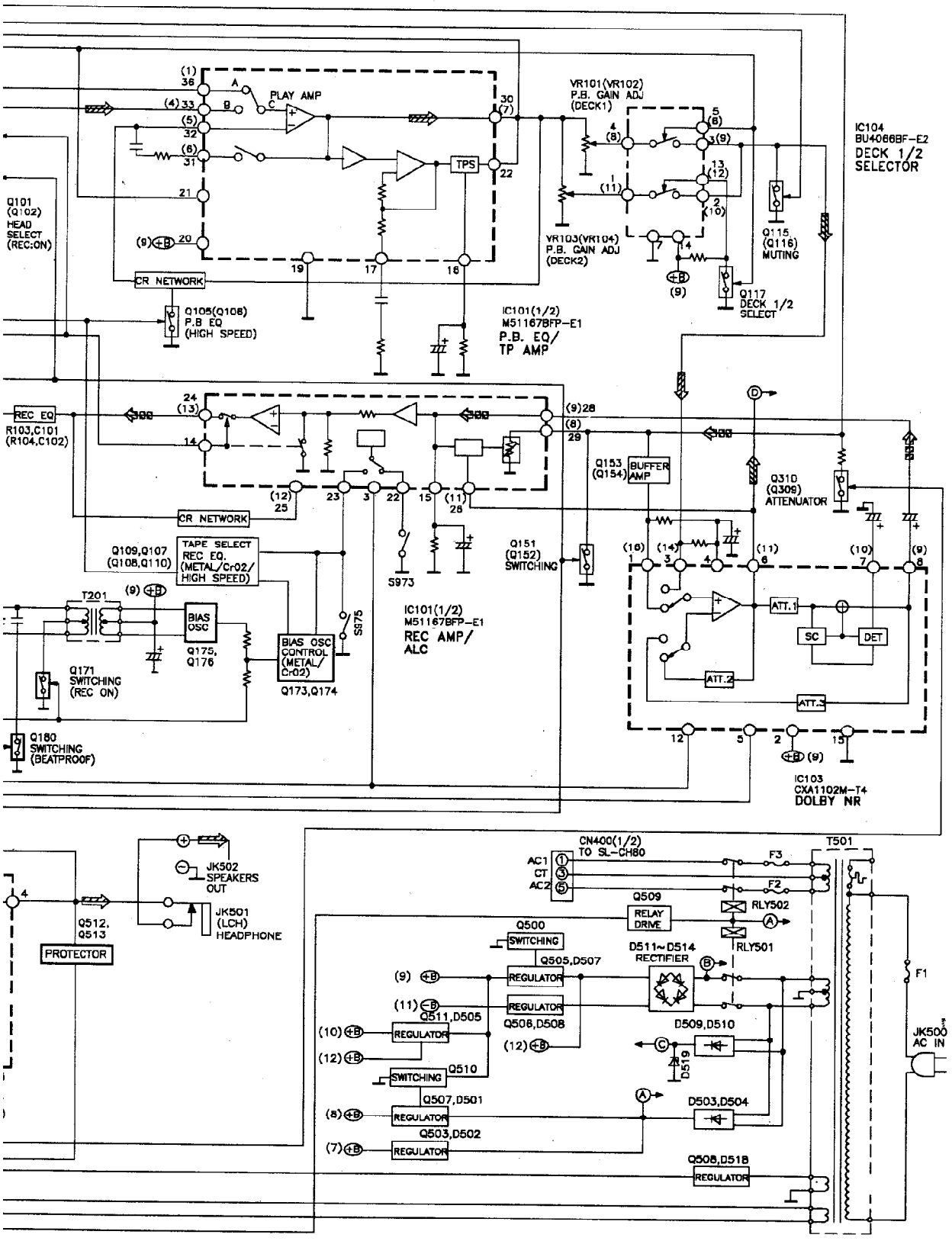




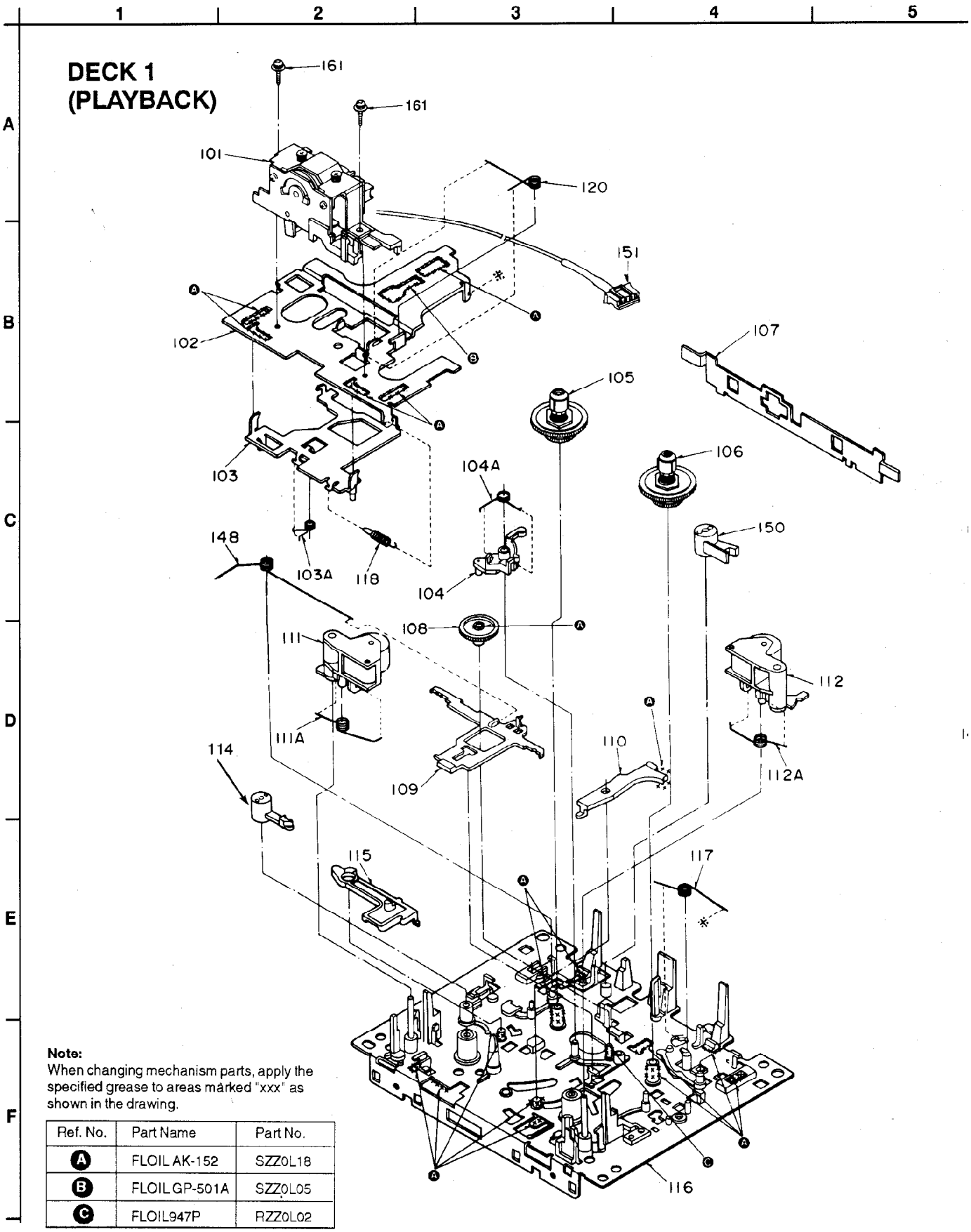
IC601
M38173M6272
SYSTEM CONTROL AND FL DRIVE




IC305(IC306)
(1/2)
BA4558FDXE2
FILTER AMP
N.F
RESISTOR LADDER (MASTER VR)
RESISTOR LADDER (SUB VR)
(LCH) DECK 1 PLAYBACK HEAD
Q103 (Q104) HEAD SELECT (PLAY:ON)
(LCH) DECK 2 R/P HEAD
IC102 BA7755A R / P SELECTOR
Q205 MOTOR SPEED CONTROL
Q204 MOTOR SPEED CONTROL
MOTOR DRIVE
Q203,Q220
MOTOR (DECK1)
MOTOR (DECK2)
Q202
Q201,Q219
Q218 SWITCHING (REC ON)
DECK 1 ERASE HEAD
Q179 SWITCHING (BEATPROOF)
IC971 DN6851ALB HALL
IC951 DN6851ALB HALL
SOLENOID (DECK1)
SOLENOID (DECK2)
SOLENOID DRIVE
D951
D971
LATCH
16-BITS SHIFT REGISTER
BUFFER
INPUT SELECTOR
VCC
MKCLK
MKDA
IC105 BU2040F-E2 SYSTEM CONTROL (I/O)
Q325 ATTENUATOR CONTROL
Q321 (Q322) MUTING
Q326 ATTENUATOR CONTROL
Q323 (Q324) MUTING
Q307 (Q308) MUTING
Q312 SWITCHING
Q313 MUTING
MUTEA
IC501 SVI3101D POWER AMP
DETECTION
MUTING
POWER ON / OFF
BIAS
NOTES
( ) INDICATES PIN NO. OF RIGHT CHANNEL
AUX. SIGNAL LINE
MAIN SIGNAL LINE
FM/AM SIGNAL LINE
PLAYBACK SIGNAL LINE
RECORD SIGNAL LINE
CD SIGNAL LINE
SP SIGNAL LINE

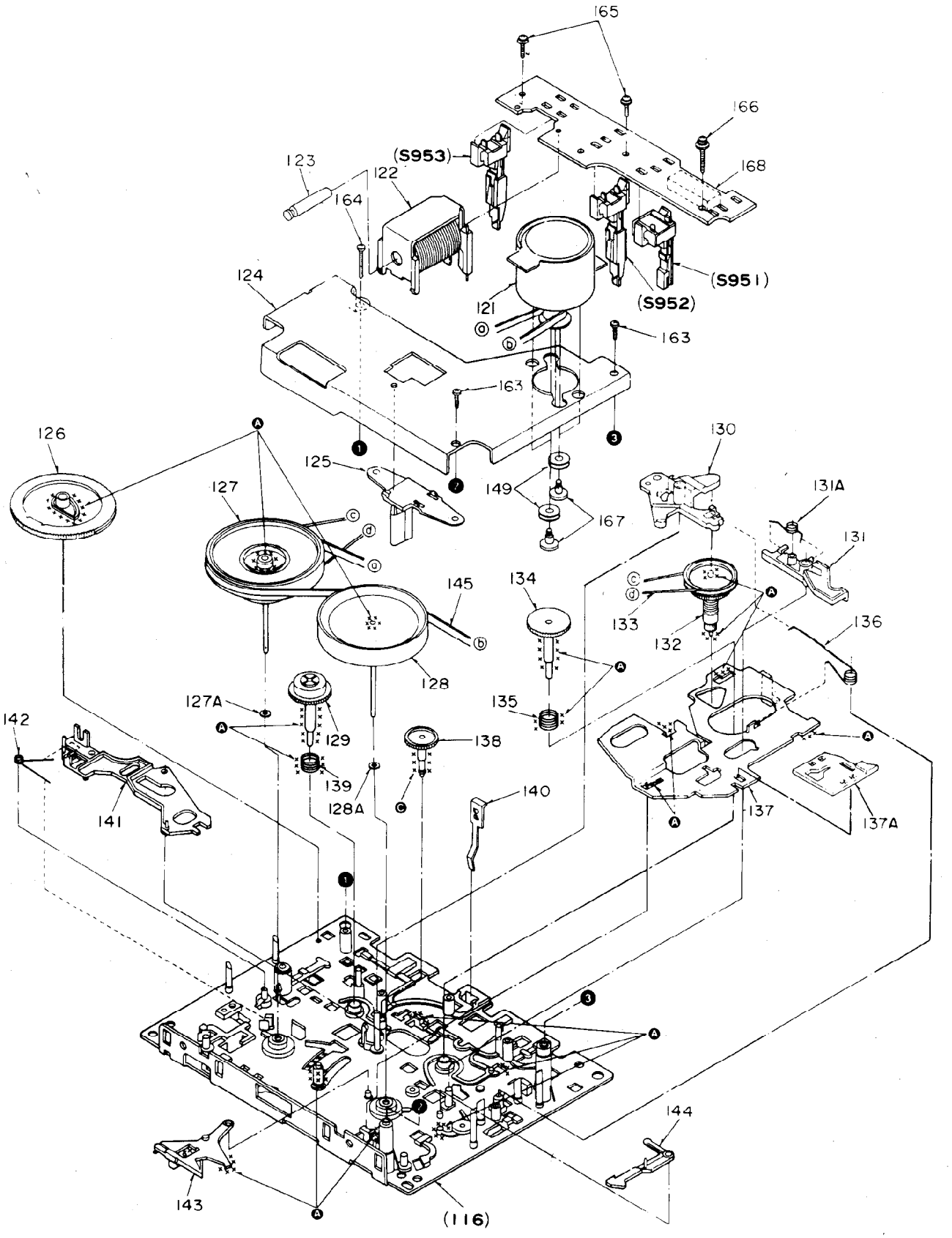

PLAY AMP
TPS
CR NETWORK
Q101 (Q102) HEAD SELECT (REC:ON)
Q105(Q108) P.B EQ (HIGH SPEED)
IC101(1/2) M51167BFP-E1 P.B. EQ/ TP AMP
VR101(VR102) P.B. GAIN ADJ (DECK1)
VR103(VR104) P.B. GAIN ADJ (DECK2)
IC104 BU4066BF-E2 DECK 1/2 SELECTOR
Q115 (Q116) MUTING
Q117 DECK 1/2 SELECT
REC EQ
R103,C101 (R104,C102)
Q153 (Q154) BUFFER AMP
Q310 (Q309) ATTENUATOR
TAPE SELECT REC EQ. (METAL/CrO2/ HIGH SPEED)
Q109,Q107 (Q108,Q110)
Q151 (Q152) SWITCHING
S973
T201
BIAS OSC
Q175, Q176
BIAS OSC CONTROL (METAL/ CrO2)
Q173,Q174
S975
IC101(1/2) M51167BFP-E1 REC AMP/ ALC
Q171 SWITCHING (REC ON)
Q180 SWITCHING (BEATPROOF)
ATT.1
ATT.2
ATT.3
SC
DET
IC103 CXA1102M-T4 DOLBY NR
JK502 SPEAKERS OUT
JK501 (LCH) HEADPHONE
Q512, Q513
PROTECTOR
CN400(1/2) TO SL-CH80
AC1
CT
AC2
Q509
RELAY DRIVE
RLY502
RLY501
F3
F2
F1
T501
JK500 AC IN
Q500 SWITCHING
Q505,D507 REGULATOR
Q508,D508 REGULATOR
Q511,D505 REGULATOR
Q510 SWITCHING
Q507,D501 REGULATOR
Q503,D502 REGULATOR
D511~D514 RECTIFIER
D509,D510
D519
D503,D504
Q508,D518 REGULATOR

■ MECHANISM PARTS LOCATION (DECK 1: RAA0355, DECK 2: RAA0356)

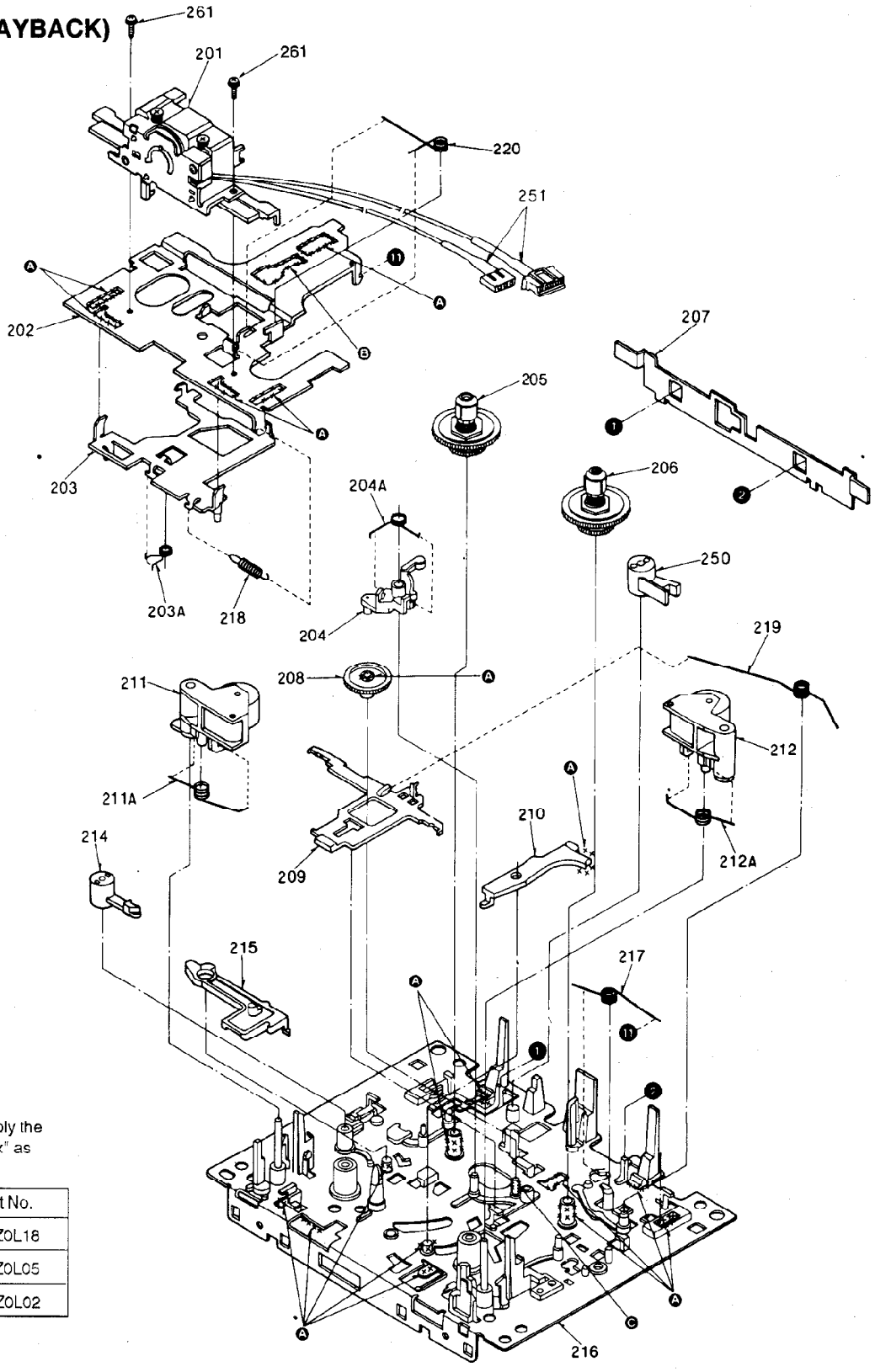


Note:
When changing mechanism parts, apply the specified grease to areas marked "xxx" as shown in the drawing.

Ref. No.	Part Name	Part No.
Ⓐ	FLOIL AK-152	SZZ0L18
Ⓑ	FLOIL GP-501A	SZZ0L05
Ⓒ	FLOIL947P	RZZ0L02

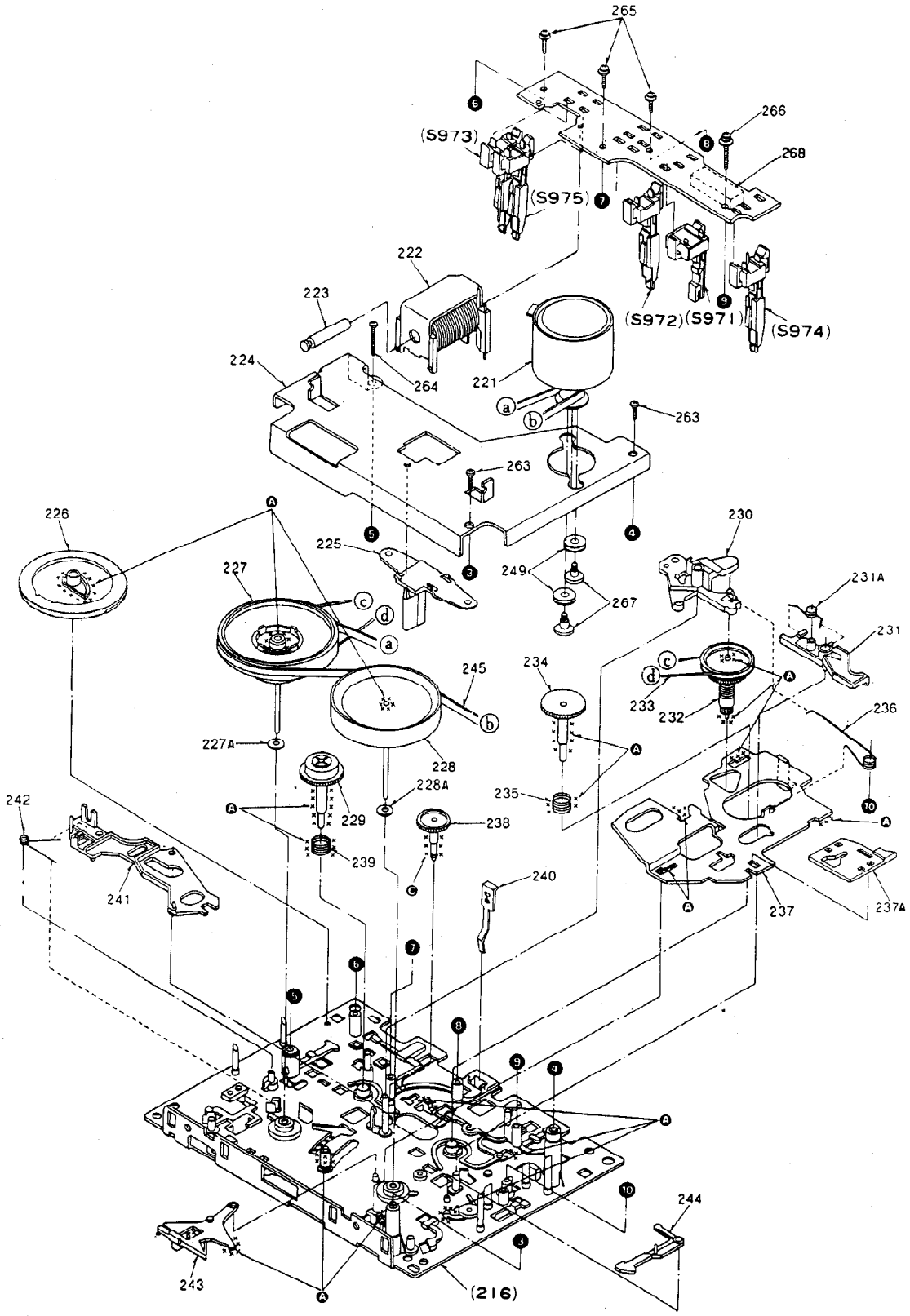

165
166
168
(S953)
123
122
164
(S951)
(S952)
124
121
163
163
126
125
149
167
130
131A
131
127
145
134
133
132
136
128
127A
129
138
135
142
139
128A
140
141
137
137A
144
143
(116)

DECK 2
(RECORD/PLAYBACK)



Note:
When changing mechanism parts, apply the specified grease to areas marked "xxx" as shown in the drawing.

Ref. No.	Part Name	Part No.
A	FLOIL AK-152	SZZ0L18
B	FLOIL GP-501A	SZZ0L05
C	FLOIL947P	RZZ0L02


265
266
268
(S973)
(S975)
(S972)
(S971)
(S974)
222
223
224
264
221
263
263
226
225
227
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267
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231A
231
245
234
233
232
236
227A
228
228A
229
238
235
242
239
240
241
237
237A
244
243
(216)

■ MECHANISM PARTS LIST

NOTES : [M] indicates in the Remarks columns indicates parts supplied by **MESA**.

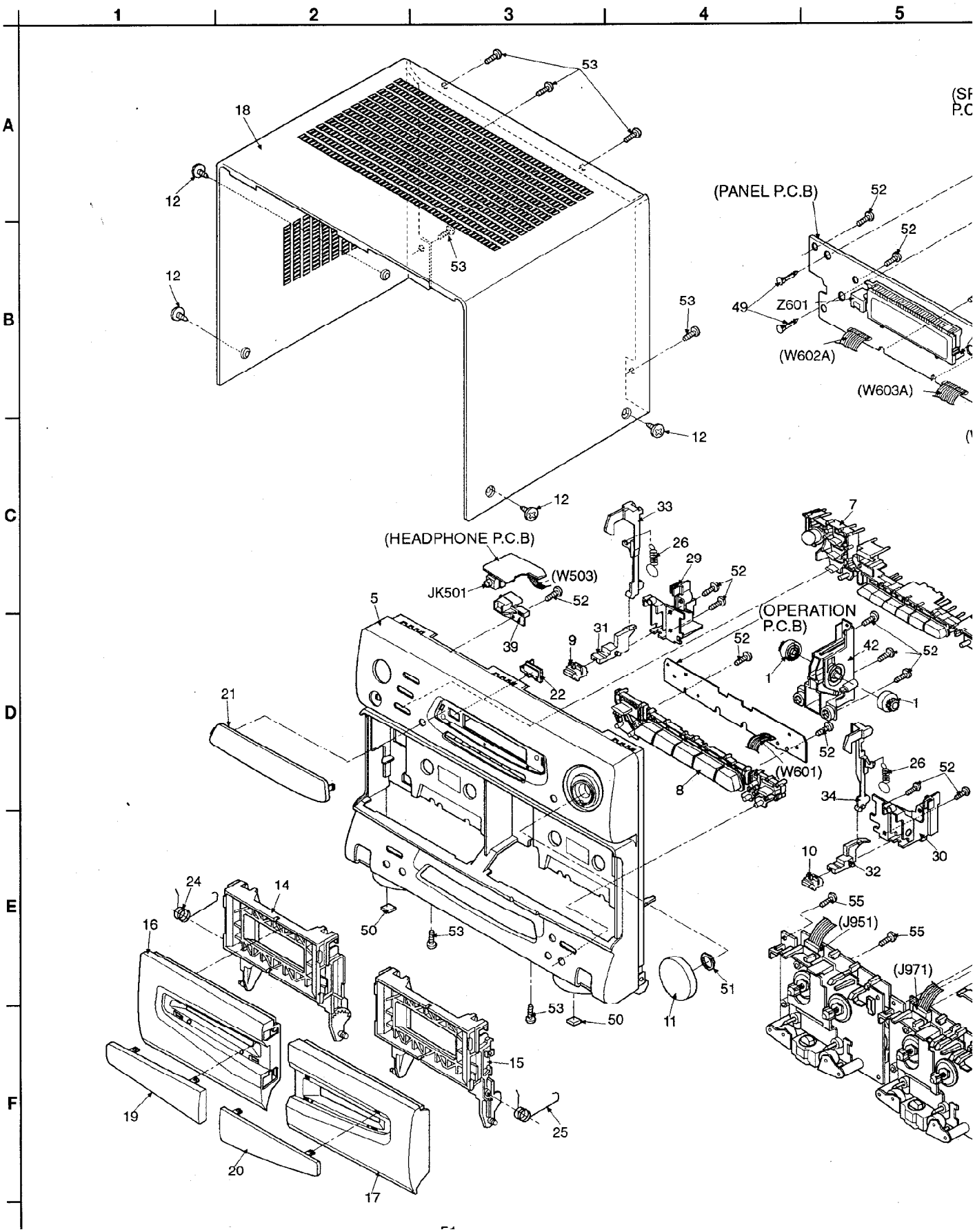
Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE MECHANISM	
		(DECK 1)	
101	RXQ0292	HEAD BLOCK ASS'Y	
102	RUA793ZF	CHASSIS	
103	RZLAR300A	LEVER ASS'Y	
103A	RUW143ZA	SPRING	
104	1UB0089Z	ARM	
104A	RUW148ZA	SPRING	
105	1DM0018ZB	REEL TABLE ASS'Y	
106	1DM0017ZB	REEL TABLE ASS'Y	
107	RML0069-1	LEVER	
108	RDG5772ZC	GEAR	
109	RUB508ZB	LEVER	
110	RUB506ZB	LEVER	
111	1UB0088ZB	PINCH ROLLER	
111A	RUW141ZA	SPRING	
112	1UB0087ZB	PINCH ROLLER	
112A	RUW140ZB	SPRING	
114	RNL1ZD	ARM	
115	RUB503ZD	LEVER	
116	RZUAR300A	CHASSIS ASS'Y	
117	RUW142ZA	SPRING	
118	RUD105ZA	SPRING	
120	RUW139ZA	SPRING	
121	RFM133ZA	MOTOR ASS'Y	
122	1UE0015ZB	PLUNGER	
123	RUB428ZE	SHAFT	
124	RUL1030YA	PLATE	
125	RMD5014ZC	SPACER	
126	RDG5927ZG	GEAR	
127	1DW0037ZB	FLYWHEEL ASS'Y	
127A	RNW139ZA	WASHER	
128	1DW0038ZB	FLYWHEEL ASS'Y	
128A	RNW138ZA	WASHER	
129	1DG0006ZB	GEAR ASS'Y	
130	RUB513ZD	ARM	
131	1UB0091Z	LEVER	
131A	RUW146ZA	SPRING	
132	1DR0011ZB	PULLEY ASS'Y	
133	RDV90ZB	BELT	
134	RDG5769ZA	GEAR	
135	RUQ111ZB	SPRING	
136	RUW145ZA	SPRING	
137	1UB0090ZA	ROD	
137A	RUB512ZB	ROD	

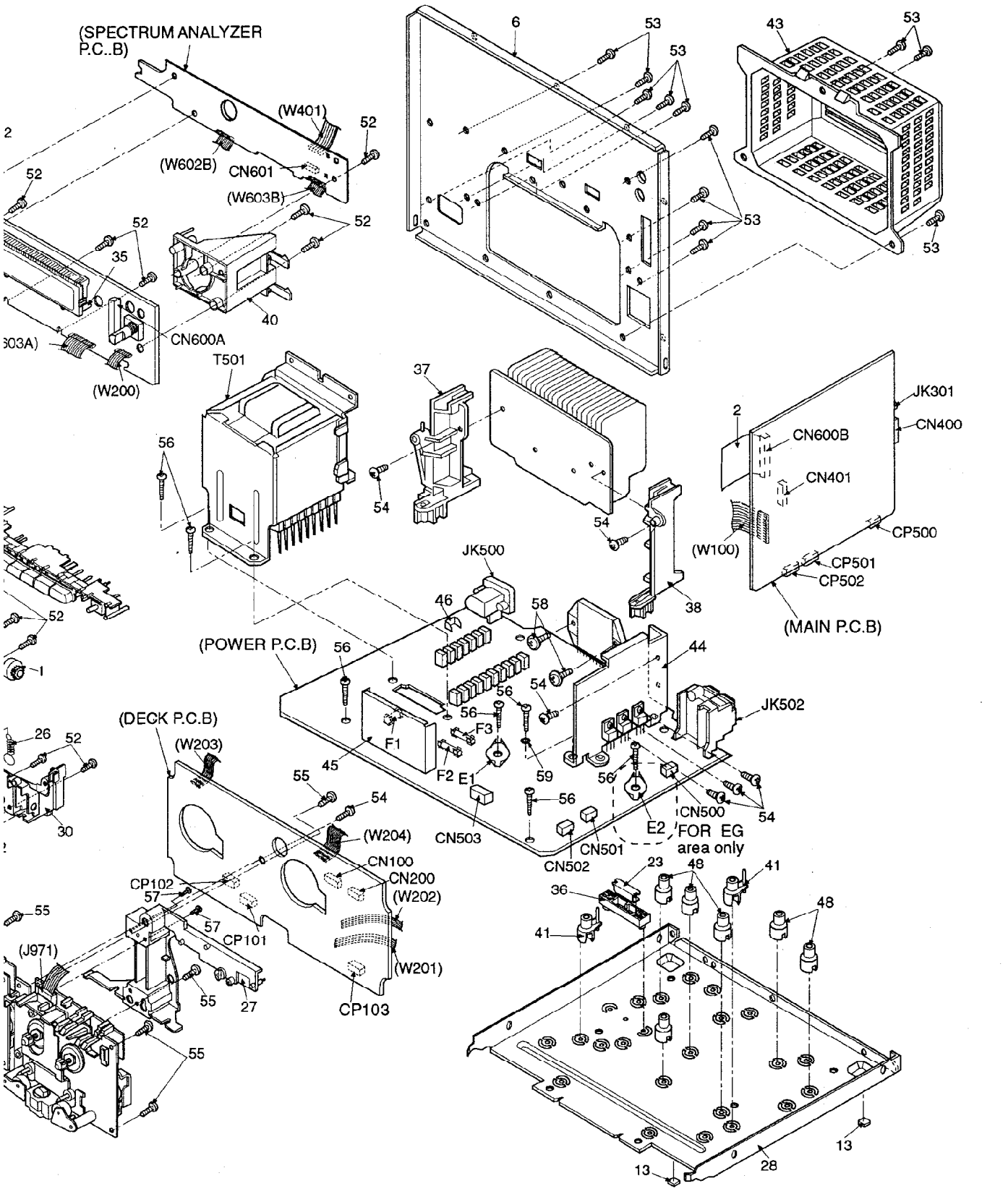
Ref No.	Part No.	Part Name & Description	Remarks
138	RDG5773ZB	GEAR	
139	RUQ112ZA	SPRING	
140	RUS609ZC	SPRING	
141	RUB514ZC	LEVER	
142	RUW147ZA	SPRING	
143	RUB515ZA	LEVER	
144	RUB509ZA	LEVER	
145	RDV108ZA	BELT	
148	RUW144ZA	SPRING	
149	RHG3032ZA	RUBBER	
150	RNL180ZB	LEVER	
151	REX0450	LEAD WIRE BLOCK (4P)	[M]
161	XTW2+6L	SCREW	
163	XTN26+7J	SCREW	
164	RHE5203ZA	SCREW	
165	XTW2+8S	SCREW	
166	XYC2+JF16	SCREW	
167	RHD26002	SCREW	
168	RJS7T7ZA	CONNECTOR	

Ref No.	Part No.	Part Name & Description	Remarks
		(DECK 2)	
201	RXQ0291	HEAD BLOCK ASS'Y	
202	RUA793ZF	CHASSIS	
203	RZLAR300A	LEVER ASS'Y	
203A	RUW143ZA	SPRING	
204	1UB0089ZA	ARM	
204A	RUW148ZA	SPRING	
205	1DM0018ZB	REEL TABLE ASS'Y	
206	1DM0017ZB	REEL TABLE ASS'Y	
207	RML0069-1	LEVER	
208	RDG5772ZC	GEAR	
209	RUB508ZB	LEVER	
210	RUB506ZB	LEVER	
211	1UB0088ZB	PINCH ROLLER	
211A	RUW141ZA	SPRING	
212	1UB0087ZB	PINCH ROLLER	
212A	RUW140ZB	SPRING	
214	RNL1ZD	ARM	
215	RUB503ZD	LEVER	
216	RZUAR300A	CHASSIS ASS'Y	
217	RUW142ZA	SPRING	
218	RUD105ZA	SPRING	
219	RUW144ZA	SPRING	
220	RUW139ZA	SPRING	
221	RFM133ZA	MOTOR ASS'Y	
222	1UE0015ZB	PLUNGER	
223	RUB428ZE	SHAFT	
224	RUL1030YA	PLATE	
225	RMD5014ZC	SPACER	
226	RDG5927ZG	GEAR	
227	1DW0037ZB	FLYWHEEL ASS'Y	
227A	RNW139ZA	WASHER	
228	1DW0038ZB	FLYWHEEL ASS'Y	
228A	RNW138ZA	WASHER	
229	1DG0006ZB	GEAR ASS'Y	
230	RUB513ZD	LEVER	
231	1UB0091Z	LEVER	
231A	RUW146ZA	SPRING	
232	1DR0011ZB	PULLEY ASS'Y	
233	RDV90ZB	BELT	
234	RDG5769ZA	GEAR	
235	RUQ111ZB	SPRING	
236	RUW145ZA	SPRING	
237	1UB0090ZA	ROD	
237A	RUB512ZB	ROD	

Ref No.	Part No.	Part Name & Description	Remarks
238	RDG5773ZA	GEAR	
239	RUQ112ZA	SPRING	
240	RUS609ZC	SPRING	
241	RUB514ZC	LEVER	
242	RUW147ZA	SPRING	
243	RUB515ZA	LEVER	
244	RUB509ZA	LEVER	
245	RDV108ZA	BELT	
249	RHG3032ZA	RUBBER	
250	RNL180ZB	LEVER	
251	REX0305	LEAD WIRE BLOCK (5P)	[M]
261	XTW2+6L	SCREW	
263	XTN26+7J	SCREW	
264	RHE5203ZA	SCREW	
265	XTW2+8S	SCREW	
266	XYC2+JF16	SCREW	
267	RHD26002	SCREW	
268	RJS10T7ZA	SOCKET (J971)	

■ CABINET PARTS LOCATION




5
6
7
8
9
(SPECTRUM ANALYZER P.C..B)
(W401)
(W602B)
CN601
(W603B)
CN600A
(W200)
T501
(POWER P.C.B)
JK500
JK301
CN400
CN600B
CN401
CP500
CP501
CP502
(MAIN P.C.B)
JK502
(W100)
(DECK P.C.B)
(W203)
(W204)
CN100
CN200
(W202)
(W201)
CP102
CP101
CP103
(J971)
F1
F2
F3
E1
E2
CN503
CN501
CN502
CN500
FOR EG area only

■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area)
Parts without these indications can be used for all areas.
* [M] Indicates in the Remarks columns indicates parts supplied by **MESA.**

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RDG0129	DAMPER GEAR	[M]
2	REE0546	FFC (PANEL-MAIN)	[M]
5	RFKGUCH80PK	FRONT PANEL ASS'Y	[M]
6	RGR0182A-G	REAR PANEL	[M] (E)
6	RGR0182A-H	REAR PANEL	[M] (EB, GN)
6	RGR0182A-J	REAR PANEL	[M] (EG)
7	RGU1005-K	GEQ BUTTON	[M]
8	RGU1006-K	CASSETTE BUTTON	[M]
9	RGU1007-K	EJECT KNOB (L)	[M]
10	RGU1008-K	EJECT KNOB (R)	[M]
11	RGW0194-K	VOL KNOB	[M]
12	RHD30007	SCREW	
13	RKA0059-K	LEG RUBBER	[M]
14	RFKLACH455P3	CASS HOLDER ASS'Y L	[M]
15	RFKLACH455P4	CASS HOLDER ASS'Y R	[M]
16	RKF0355-K	CASSETTE LID (L)	[M]
17	RKF0356-K	CASSETTE LID (R)	[M]
18	RKM0247Z-K	CABINET	[M]
19	RKW0321-Q	CASSETTE WINDOW (L)	[M]
20	RKW0322-Q	CASSETTE WINDOW (R)	[M]
21	RKW0323-Q	FL WINDOW	[M]
22	RKW0324-Q	SENSOR FILTER	[M]
23	RMA0678	TRANS SUPPORT ANGLE	[M]
24	RMB0293	OPEN SPRING (L)	[M]
25	RMB0294	OPEN SPRING (R)	[M]
26	RMB0295	EJECT SPRING	[M]
27	RMK0059-1E	CASSETTE PCB SUPPORT	[M]
28	RMK0199	BOTTOM CHASSIS	[M]
29	RML0301	EJECT LEVER STAND L	[M]
30	RML0302	EJECT LEVER STAND R	[M]
31	RML0303	EJECT LEVER (L)	[M]
32	RML0304	EJECT LEVER (R)	[M]
33	RMM0102	EJECT ROD (L)	[M]
34	RMM0103	EJECT ROD (R)	[M]
35	RMN0253	FL HOLDER	[M]
36	RMR0651-K	TRANS SUPPORT	[M]
37	RMR0653-K	HEAT SINK SUPPORT L	[M]
38	RMR0654-K	HEAT SINK SUPPORT R	[M]
39	RMR0730-X	HP JACK HOLDER	[M]
40	RMR0731-X	MAIN PCB SUPPORT	[M]
41	RMR0741-X	PCB SUPPORT (PIN)	[M]
42	RMS0401	DAMPER GEAR HOLDER	[M]
43	RMV0058	HEAT SINK COVER	[M]
44	RMY0116	SUB HEAT SINK	[M]
45	RSC0311	SHIELD PLATE	[M]
46	RSC0332	PROTECTION PLATE	[M]
48	SHE187-3	PCB SUPPORT	
49	SHR8005	PCB SUPPORT	
50	SHS3276	LEG FELT	[M]
51	XNS9D	NUT	
52	XTBS26+10J	SCREW	
53	XTBS3+8JFZ1	SCREW	
54	XTB3+12CFN	SCREW	
55	XTB3+12JFR	SCREW	
56	XTB3+20J	SCREW	
57	XTV26+6F	SCREW	
58	XTW3+15T	SCREW	
59	XWA3B	SPRING WASHER	
		INTEGRATED CIRCUITS	
IC101	M51167BFP-E1	IC, R/P	
IC102	BA7755A	IC, SW	
IC103	CXA1102M-T4	IC, DOLBY	
IC104	BU4066BF-E2	IC, ANALOG SW	
IC105	BU2040F-E2	IC, I/O	[M]
IC301	UPD4052BG-E2	IC, ANALOG SW	[M]
IC302	M62408FP	IC, AUDIO	
IC305	BA4558FDXE2	IC, OP AMP	[M]
IC306	BA4558FDXE2	IC, OP AMP	[M]
IC501	SVI3101D	IC, HIC	⚠
IC601	M38173M6272	IC, UCOM	[M]
IC602	BA4558FDXE2	IC, OP AMP	[M]
IC603	LA5608M-TE-L	IC, RESET	
IC604	BA4558FDXE2	IC, OP AMP	[M]
IC605	BU4066BF-E2	IC, ANALOG SW	
IC606	BA4558FDXE2	IC, OP AMP	[M]
IC607	BA4558FDXE2	IC, OP AMP	[M]

Ref No.	Part No.	Part Name & Description	Remarks
IC951	DN6851ALB	IC, HALL (DK1)	
IC971	DN6851ALB	IC, HALL (DK2)	
		TRANSISTORS	
Q101	2SJ40CDTA	TRANSISTOR	
Q102	2SJ40CDTA	TRANSISTOR	
Q103	2SJ40CDTA	TRANSISTOR	
Q104	2SJ40CDTA	TRANSISTOR	
Q105	RVTDTC144TST	TRANSISTOR	
Q106	RVTDTC144TST	TRANSISTOR	
Q107	RVTDTC144TST	TRANSISTOR	
Q108	RVTDTC144TST	TRANSISTOR	
Q109	RVTDTC144TST	TRANSISTOR	
Q110	RVTDTC144TST	TRANSISTOR	
Q115	2SD1020HTA	TRANSISTOR	[M]
Q116	2SD1020HTA	TRANSISTOR	[M]
Q117	RVTDTC144EST	TRANSISTOR	
Q151	RVTDTC144TST	TRANSISTOR	
Q152	RVTDTC144TST	TRANSISTOR	
Q153	2SC1740SLNET	TRANSISTOR	
Q154	2SC1740SLNET	TRANSISTOR	
Q171	2SD1450STA	TRANSISTOR	
Q173	RVTDTC144TST	TRANSISTOR	
Q174	2SC1740SSTA	TRANSISTOR	
Q175	2SD1450STA	TRANSISTOR	
Q176	2SD1450STA	TRANSISTOR	
Q179	2SC2784FTA	TRANSISTOR	[M]
Q180	2SC2784FTA	TRANSISTOR	[M]
Q201	2SD965RTA	TRANSISTOR	
Q202	2SK301QTA	TRANSISTOR	[M]
Q203	2SD965RTA	TRANSISTOR	
Q204	2SK301QTA	TRANSISTOR	[M]
Q205	RVTDTC144TST	TRANSISTOR	
Q206	2SB621RTA	TRANSISTOR	
Q207	2SB621RTA	TRANSISTOR	
Q208	RVTDTC114TST	TRANSISTOR	
Q209	RVTDTC114TST	TRANSISTOR	
Q218	RVTDTA114EST	TRANSISTOR	
Q219	RVTDTA143XST	TRANSISTOR	
Q220	RVTDTA143XST	TRANSISTOR	
Q300	RVTDTA144TST	TRANSISTOR	
Q301	2SC1740SSTA	TRANSISTOR	
Q302	2SC1740SSTA	TRANSISTOR	
Q307	2SD1020HTA	TRANSISTOR	[M]
Q308	2SD1020HTA	TRANSISTOR	[M]
Q309	2SC1740SSTA	TRANSISTOR	
Q310	2SC1740SSTA	TRANSISTOR	

Ref No.	Part No.	Part Name & Description	Remarks
Q311	2SC1740SSTA	TRANSISTOR	
Q312	RVTDTA124EST	TRANSISTOR	
Q313	RVTDTC124EST	TRANSISTOR	[M]
Q315	2SC1740SLNST	TRANSISTOR	
Q316	2SC1740SLNST	TRANSISTOR	
Q317	2SJ40CTA	TRANSISTOR	
Q318	2SJ40CTA	TRANSISTOR	
Q319	2SK381CTA	TRANSISTOR	
Q320	2SK381CTA	TRANSISTOR	
Q321	2SC1740SSTA	TRANSISTOR	
Q322	2SC1740SSTA	TRANSISTOR	
Q323	2SC1740SSTA	TRANSISTOR	
Q324	2SC1740SSTA	TRANSISTOR	
Q325	RVTDTA114TST	TRANSISTOR	
Q326	RVTDTA114TST	TRANSISTOR	
Q327	RVTDTA124EST	TRANSISTOR	
Q328	RVTDTC124EST	TRANSISTOR	[M]
Q500	2SA933SSTA	TRANSISTOR	
Q503	2SD2037ETA	TRANSISTOR	[M]
Q505	2SD1762E	TRANSISTOR	[M] ⚠
Q506	2SB1185E	TRANSISTOR	⚠
Q507	2SD1273P	TRANSISTOR	⚠
Q508	2SB621ARTA	TRANSISTOR	
Q509	2SC2785FTA	TRANSISTOR	⚠
Q510	2SA564RTA	TRANSISTOR	
Q511	2SD1762E	TRANSISTOR	[M] ⚠
Q512	2SC1740SSTA	TRANSISTOR	
Q513	2SC1740SSTA	TRANSISTOR	
Q601	2SC1740SSTA	TRANSISTOR	
Q602	2SC1740SSTA	TRANSISTOR	
		DIODES	
D171	RVD1SS133TA	DIODE	
D172	RVDMTZ4R7BTA	DIODE	
D173	RVD1SS133TA	DIODE	
D174	RVDMTZ3R6BTA	DIODE	[M]
D301	RVD1SS133TA	DIODE	
D302	RVD1SS133TA	DIODE	
D303	RVD1SS133TA	DIODE	
D305	RVDMTZ8R2CTA	DIODE	[M]
D306	RVD1SS133TA	DIODE	
D307	RVD1SS133TA	DIODE	
D308	RVD1SS133TA	DIODE	
D309	RVDMTZ6R8BTA	DIODE	
D311	MA29WATA	DIODE	
D312	MA29WATA	DIODE	
D500	RVD1SS133TA	DIODE	

Ref No.	Part No.	Part Name & Description	Remarks
D501	RVD1SS133TA	DIODE	
D502	RVDMTZ6R8ATA	DIODE	[M]
D503	1D3E	DIODE	[M] ⚠
D504	1D3E	DIODE	[M] ⚠
D505	RVDMTZ6R2ATA	DIODE	[M]
D507	RVDMTZ15CTA	DIODE	[M]
D508	RVDMTZ8R2CTA	DIODE	[M]
D509	1D3E	DIODE	[M] ⚠
D510	1D3E	DIODE	[M] ⚠
D511	1N5402BM21	DIODE	⚠
D512	1N5402BM21	DIODE	⚠
D513	1N5402BM21	DIODE	⚠
D514	1N5402BM21	DIODE	⚠
D516	RVDMTZ15CTA	DIODE	[M] ⚠
D517	1D3E	DIODE	[M] ⚠
D518	MA4300HTA	DIODE	⚠
D519	RVDMTZ5R1BTA	DIODE	
D520	RVDMTZ10BTA	DIODE	⚠
D601	RVD1SS133TA	DIODE	
D602	RVDMTZ4R7BTA	DIODE	
D603	RVD1SS133TA	DIODE	
D604	RVD1SS133TA	DIODE	
D605	RVD1SS133TA	DIODE	
D606	RVD1SS133TA	DIODE	
D607	RVD1SS133TA	DIODE	
D608	RVD1SS133TA	DIODE	
D610	1SS291TA	DIODE	
D611	RVD1SS133TA	DIODE	
D612	RVD1SS133TA	DIODE	
D613	RVD1SS133TA	DIODE	
D614	RVD1SS133TA	DIODE	
D615	RVD1SS133TA	DIODE	
D616	RVD1SS133TA	DIODE	
D617	RVD1SS133TA	DIODE	
D621	RVD1SS133TA	DIODE	
D622	RVD1SS133TA	DIODE	
D629	RVD1SS133TA	DIODE	
D630	RVD1SS133TA	DIODE	
D951	RVD1SS133TA	DIODE (DK1)	
D971	RVD1SS133TA	DIODE (DK2)	
		VARIABLE RESISTORS	
VR101	RVNCC24B1T-A	VR, DK1 Lch (GAIN)	
VR102	RVNCC24B1T-A	VR, DK1 Rch (GAIN)	
VR103	RVNCC24B1T-A	VR, DK2 Lch (GAIN)	
VR104	RVNCC24B1T-A	VR, DK2 Rch (GAIN)	
VR201	RVNCC73B1T-A	VR, DK1 TPE SPD(NOR)	

Ref No.	Part No.	Part Name & Description	Remarks
VR202	RVNCC24B1T-A	VR, DK2 TPE SPD(NOR)	
VR203	RVNCC14B1T-A	VR, DK2 TPE SPD(HI)	
VR601	RRV16B24104A	VR, JOG	[M]
		SWITCHES	
S601	EVQ21405R	SW, TAPE EDIT(NOR)	
S602	EVQ21405R	SW, TAPE EDIT(HI)	
S603	EVQ21405R	SW, DECK 1/2	
S604	EVQ21405R	SW, REC PAUSE	
S605	EVQ21405R	SW, REW (TPS)	
S606	EVQ21405R	SW, REV PLAY	
S607	EVQ21405R	SW, FWD PLAY	
S608	EVQ21405R	SW, FF (TPS)	
S609	EVQ21405R	SW, STOP	
S610	EVQ21405R	SW, REVERSE MODE	
S611	EVQ21405R	SW, DOLBY NR	
S612	EVQ21405R	SW, COUNTER RESET	
S613	EVQ21405R	SW, POWER	
S614	EVQ21405R	SW, V BASS	
S615	EVQ21405R	SW, TIME/EFFECT DWN	
S616	EVQ21405R	SW, TIME/EFFECT UP	
S617	EVQ21405R	SW, REC TIMER	
S618	EVQ21405R	SW, PLAY TIMER	
S619	EVQ21405R	SW, CLOCK/TIMER	
S620	EVQ21405R	SW, SET	
S621	EVQ21405R	SW, EQ ON/FLAT	
S622	EVQ21405R	SW, EQ MODE	
S623	EVQ21405R	SW, SPACE MODE	
S624	EVQ21405R	SW, DISPLAY	
S951	RSH1A89ZD-U	SW, MODE DETECT DK1	
S952	RSH1A90YD-U	SW, TAPE DETECT DK1	
S953	RSH1A90YD-U	SW, CROS DETECT DK1	
S971	RSH1A89ZD-U	SW, MODE DETECT DK2	
S972	RSH1A90YD-U	SW, TAPE DETECT DK2	
S973	RSH1A90YD-U	SW, TAB DETECT DK2	
S974	RSH1A90YD-U	SW, TAB DETECT DK2	
S975	RSH1A90YD-U	SW, CRO2 DETECT DK2	
		CONNECTORS	
CN100	RJS10T4ZA	CONNECTOR (10P)	
CN200	RJS8T4ZA	CONNECTOR (8P)	
CN400	RJT065K15	CONNECTOR (15P)	
CN401	RJS1A5206	CONNECTOR (6P)	[M]
CN500	SJS50778JQ	CONNECTOR (7P)	
CN501	SJS50778JQ	CONNECTOR (7P)	
CN502	SJS50778JQ	CONNECTOR (7P)	

Ref No.	Part No.	Part Name & Description	Remarks
CN503	RJS1A5205	CONNECTOR (5P)	[M]
CN510	RJS1A1101T1	CONNECTOR (1P)	
CN511	RJS1A1101T1	CONNECTOR (1P)	
CN512	RJS1A1101T1	CONNECTOR (1P)	
CN513	RJS1A1101T1	CONNECTOR (1P)	
CN520	RJS1A1101T1	CONNECTOR (1P)	
CN521	RJS1A1101T1	CONNECTOR (1P)	
CN522	RJS1A1101T1	CONNECTOR (1P)	
CN523	RJS1A1101T1	CONNECTOR (1P)	
CN524	RJS1A1101T1	CONNECTOR (1P)	
CN525	RJS1A1101T1	CONNECTOR (1P)	
CN526	RJS1A1101T1	CONNECTOR (1P)	
CN527	RJS1A1101T1	CONNECTOR (1P)	
CN528	RJS1A1101T1	CONNECTOR (1P)	
CN529	RJS1A1101T1	CONNECTOR (1P)	
CN600A	RJS1A6223-1	CONNECTOR (23P)	
CN600B	RJS1A6823	CONNECTOR (23P)	
CN601	RJS1A5207	CONNECTOR (7P)	
CP101	RJP5G18ZA	CONNECTOR (5P)	
CP102	RJP4G18ZA	CONNECTOR (4P)	
CP103	RJP3G1ZA	CONNECTOR (3P)	
CP500	RJP7G9YA	CONNECTOR (7P)	[M]
CP501	RJP7G9YA	CONNECTOR (7P)	[M]
CP502	RJP7G9YA	CONNECTOR (7P)	[M]
J951	RJS7T7ZA	CONNECTOR (DK1-7P)	
J971	RJS10T7ZA	CONNECTOR (DK2-10P)	
		EARTH TERMINALS	
E1	SNE1004-1	EARTH PLATE	
E2	SNE1004-1	EARTH PLATE	(EG)
		COILS & TRANSFORMERS	
L103	RLE2B001-1M	TRAP COIL	[M]
L104	RLE2B001-1M	TRAP COIL	[M]
L201	RL08C002M-T	BIAS OSC COIL	
L202	RLQZB470KT-D	RF CHOKE COIL	
L300	RLQZPR47KT-Y	AXIAL COIL	
L500	SLQZ650MH49	AC LINE COIL	⚠
L501	SLQY07G-40	SP COIL	
L502	SLQY07G-40	SP COIL	
L601	RLQZP3R3KT-Y	AXIAL COIL	
T501	RTP1M3B005	TRANSFORMER	[M] ⚠

Ref No.	Part No.	Part Name & Description	Remarks
		COMPONENT COMBINATIONS	
Z101	EXBF6L306SYV	BLOCK RESISTOR	
Z102	EXBF6L306SYV	BLOCK RESISTOR	
Z103	EXBF6L306SYV	BLOCK RESISTOR	
Z501	BL02RN2R65T2	BEAD CORE	(EG)
Z502	BL02RN2R65T2	BEAD CORE	(EG)
Z503	BL02RN2R65T2	BEAD CORE	(EG)
Z601	RCDHC-278N	REMO-CON SENSOR	
		OSCILLATORS	
X601	RSXZ4M19M01T	4.19MHZ X'TAL	
X602	RSXD32K7S02	32.768KHZ X'TAL	[M]
		DISPLAY TUBE	
FL601	RSL0164-F	FL METER	[M]
		FUSES	
F1	XBA2C10TB0	FUSE	⚠
F2	XBA2C08TB0	FUSE	⚠
F3	XBA2C08TB0	FUSE	⚠
		FUSE CLIPS	
FC1	EYF52BC	FUSE HOLDER	
FC2	EYF52BC	FUSE HOLDER	
FC3	EYF52BC	FUSE HOLDER	
FC4	EYF52BC	FUSE HOLDER	
FC5	EYF52BC	FUSE HOLDER	
FC6	EYF52BC	FUSE HOLDER	
		RELAYS	
RLY501	RSY0013-0	RELAY	⚠
RLY502	RSY0013-0	RELAY	⚠
		JACKS	
JK301	RJII3209N	JK, RCA	[M]
JK500	SJS9236	JK, AC INLET	(E, EB, EG) ⚠
JK500	SJSD16	JK, AC INLET	(GN) ⚠
JK501	RJJ37TK01-C	JK, HP	[M]
JK502	RJR0054	JK, SP TERMINAL	

■ RESISTORS & CAPACITORS

Notes :
* Capacitor values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF), F=Farads.
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
* Bracketed indications in Ref. No. columns specify the area (Refer to the first page for area). Parts without these indications can be used for all areas.
* [M] Indicates in the values & remarks column indicates parts supplied by **MESA**

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R101	ERD25TJ334T	330K 1/4W
R102	ERDS2TJ104T	100K 1/4W
R103	ERDS2TJ153T	15K 1/4W
R104	ERDS2TJ153T	15K 1/4W
R105	ERDS2TJ271T	270 1/4W
R106	ERD25TJ222T	2.2K 1/4W
R107	ERDS2TJ330T	33 1/4W
R108	ERDS2TJ330T	33 1/4W
R109	ERDS2TJ392T	3.9K 1/4W
R110	ERDS2TJ392T	3.9K 1/4W
R111	ERDS2TJ222T	2.2K 1/4W
R112	ERDS2TJ222T	2.2K 1/4W
R113	ERDS2TJ122T	1.2K 1/4W
R114	ERDS2TJ122T	1.2K 1/4W
R115	ERDS2TJ225T	2.2M 1/4W
R116	ERDS2TJ225T	2.2M 1/4W
R117	ERDS2TJ105T	1M 1/4W
R118	ERDS2TJ105T	1M 1/4W
R121	ERDS2TJ124T	120K 1/4W
R122	ERDS2TJ124T	120K 1/4W
R123	ERDS2TJ473T	47K 1/4W
R124	ERDS2TJ473T	47K 1/4W
R125	ERDS2TJ472T	4.7K 1/4W
R126	ERDS2TJ472T	4.7K 1/4W
R127	ERDS2TJ392T	3.9K 1/4W
R128	ERDS2TJ392T	3.9K 1/4W
R131	ERDS2TJ823T	82K 1/4W
R132	ERDS2TJ335T	3.3M 1/4W
R133	ERDS2TJ332T	3.3K 1/4W
R134	ERDS2TJ474T	470K 1/4W
R137	ERD25TJ103T	10K 1/4W
R138	ERD25TJ103T	10K 1/4W
R139	ERDS2TJ103T	10K 1/4W
R141	ERDS2TJ682T	6.8K 1/4W
R142	ERDS2TJ682T	6.8K 1/4W
R145	ERDS2TJ103T	10K 1/4W
R146	ERDS2TJ103T	10K 1/4W
R149	ERDS2TJ272T	2.7K 1/4W
R150	ERDS2TJ272T	2.7K 1/4W
R151	ERDS2TJ105T	1M 1/4W
R152	ERDS2TJ105T	1M 1/4W
R153	ERDS2TJ102T	1K 1/4W
R154	ERDS2TJ102T	1K 1/4W
R155	ERDS2TJ221T	220 1/4W
R156	ERDS2TJ221T	220 1/4W
R158	ERDS2TJ221T	220 1/4W
R159	ERDS2TJ222T	2.2K 1/4W
R160	ERDS2TJ222T	2.2K 1/4W
R161	ERDS2TJ472T	4.7K 1/4W
R162	ERDS2TJ472T	4.7K 1/4W
R163	ERDS2TJ433T	43K 1/4W
R169	ERDS2TJ102T	1K 1/4W
R170	ERDS2TJ102T	1K 1/4W
R172	ERDS2TJ331T	330 1/4W
R173	ERDS2TJ103T	10K 1/4W
R174	ERDS2TJ103T	10K 1/4W
R176	ERDS2TJ103T	10K 1/4W
R177	ERDS2TJ682T	6.8K 1/4W
R178	ERDS2TJ1R2T	1.2 1/4W
R179	ERDS2TJ472T	4.7K 1/4W
R180	ERDS2TJ472T	4.7K 1/4W
R181	ERD25TJ332T	3.3K 1/4W
R182	ERDS2TJ1R0T	1 1/4W
R183	ERDS2TJ104T	100K 1/4W
R184	ERDS2TJ104T	100K 1/4W
R185	ERDS2TJ104T	100K 1/4W
R186	ERDS2TJ102T	1K 1/4W
R188	ERDS2TJ102T	1K 1/4W
R189	ERDS2TJ472T	4.7K 1/4W
R200	ERDS2TJ221T	220 1/4W
R201	ERDS2TJ2R7T	2.7 1/4W
R202	ERDS2TJ562T	5.6K 1/4W
R203	ERDS2TJ153T	15K 1/4W
R204	ERDS2TJ123T	12K 1/4W
R205	ERDS2TJ334T	330K 1/4W
R206	ERDS2TJ221T	220 1/4W
R207	ERDS2TJ2R7T	2.7 1/4W
R208	ERDS2TJ123T	12K 1/4W
R209	ERDS2TJ123T	12K 1/4W
R210	ERDS2TJ272T	2.7K 1/4W
R211	ERDS2TJ334T	330K 1/4W
R212	ERDS2TJ123T	12K 1/4W
R213	ERDS2TJ152T	1.5K 1/4W
R220	ERDS2TJ472T	4.7K 1/4W
R221	ERDS2TJ2R7T	2.7 1/4W
R225	ERDS2TJ2R7T	2.7 1/4W
R226	ERDS2TJ102T	1K 1/4W
R227	ERDS2TJ102T	1K 1/4W
R228	ERDS2TJ472T	4.7K 1/4W
R229	ERDS2TJ103T	10K 1/4W
R230	ERDS2TJ472T	4.7K 1/4W
R231	ERDS2TJ472T	4.7K 1/4W
R232	ERDS2TJ222T	2.2K 1/4W
R233	ERD25TJ222T	2.2K 1/4W
R234	ERDS2TJ472T	4.7K 1/4W
R235	ERDS2TJ104T	100K 1/4W
R236	ERDS2TJ104T	100K 1/4W
R300	ERDS2TJ102T	1K 1/4W
R301	ERDS2TJ183T	18K 1/4W
R302	ERDS2TJ183T	18K 1/4W
R303	ERDS2TJ223T	22K 1/4W
R304	ERDS2TJ223T	22K 1/4W
R305	ERDS2TJ472T	4.7K 1/4W
R306	ERDS2TJ472T	4.7K 1/4W
R307	ERDS2TJ102T	1K 1/4W
R308	ERDS2TJ102T	1K 1/4W
R309	ERDS2TJ182T	1.8K 1/4W
R310	ERDS2TJ182T	1.8K 1/4W
R311	ERDS2TJ273T	27K 1/4W
R312	ERDS2TJ273T	27K 1/4W
R313	ERDS2TJ332T	3.3K 1/4W
R314	ERDS2TJ332T	3.3K 1/4W
R315	ERDS2TJ822T	8.2K 1/4W
R316	ERDS2TJ822T	8.2K 1/4W
R317	ERDS2TJ332T	3.3K 1/4W
R318	ERDS2TJ332T	3.3K 1/4W
R319	ERDS2TJ821T	820 1/4W
R320	ERDS2TJ821T	820 1/4W
R321	ERDS2TJ682T	6.8K 1/4W
R322	ERDS2TJ682T	6.8K 1/4W
R329	ERDS2TJ332T	3.3K 1/4W
R330	ERDS2TJ332T	3.3K 1/4W
R331	ERDS2TJ105T	1M 1/4W
R332	ERDS2TJ105T	1M 1/4W
R333	ERDS2TJ272T	2.7K 1/4W
R334	ERDS2TJ272T	2.7K 1/4W
R335	ERDS2TJ123T	12K 1/4W
R336	ERDS2TJ123T	12K 1/4W
R337	ERDS2TJ223T	22K 1/4W
R338	ERDS2TJ223T	22K 1/4W
R339	ERDS2TJ102T	1K 1/4W
R340	ERDS2TJ102T	1K 1/4W
R341	ERDS2TJ153T	15K 1/4W
R342	ERDS2TJ153T	15K 1/4W
R343	ERDS2TJ824T	820K 1/4W
R344	ERDS2TJ332T	3.3K 1/4W
R345	ERDS2TJ822T	8.2K 1/4W
R346	ERDS2TJ222T	2.2K 1/4W
R347	ERDS2TJ183T	18K 1/4W

Ref. No.	Part No.	Values & Remarks		
R348	ERDS2TJ103T	10K	1/4W	
R351	ERDS2TJ273T	27K	1/4W	
R352	ERDS2TJ273T	27K	1/4W	
R357	ERDS2TJ103T	10K	1/4W	
R361	ERDS2TJ104T	100K	1/4W	
R362	ERDS2TJ104T	100K	1/4W	
R363	ERDS2TJ102T	1K	1/4W	
R364	ERDS2TJ102T	1K	1/4W	
R365	ERDS2TJ222T	2.2K	1/4W	
R366	ERDS2TJ222T	2.2K	1/4W	
R369	ERDS2TJ682T	6.8K	1/4W	
R370	ERDS2TJ682T	6.8K	1/4W	
R371	ERDS2TJ332T	3.3K	1/4W	
R372	ERDS2TJ332T	3.3K	1/4W	
R373	ERDS2TJ102T	1K	1/4W	
R374	ERDS2TJ102T	1K	1/4W	
R381	ERDS2TJ222T	2.2K	1/4W	
R382	ERDS1FVJ680T	68	1/2W	
R383	ERDS2TJ222T	2.2K	1/4W	
R384	ERDS2TJ151T	150	1/4W	
R385	ERDS2TJ105T	1M	1/4W	
R386	ERDS2TJ105T	1M	1/4W	
R387	ERDS2TJ100T	10	1/4W	
R388	ERDS2TJ103T	10K	1/4W	
R389	ERDS2TJ102T	1K	1/4W	
R390	ERDS2TJ102T	1K	1/4W	
R391	ERDS2TJ153T	15K	1/4W	
R392	ERDS2TJ153T	15K	1/4W	
R393	ERDS2TJ104T	100K	1/4W	
R394	ERDS2TJ104T	100K	1/4W	
R395	ERDS2TJ682T	6.8K	1/4W	
R396	ERDS2TJ682T	6.8K	1/4W	
R397	ERDS2TJ152T	1.5K	1/4W	
R398	ERDS2TJ152T	1.5K	1/4W	
R399	ERDS2TJ823T	82K	1/4W	
R400	ERDS2TJ823T	82K	1/4W	
R401	ERDS2TJ224T	220K	1/4W	
R402	ERDS2TJ224T	220K	1/4W	
R403	ERDS2TJ223T	22K	1/4W	
R404	ERDS2TJ223T	22K	1/4W	
R405	ERDS2TJ123T	12K	1/4W	
R406	ERDS2TJ123T	12K	1/4W	
R407	ERDS2TJ223T	22K	1/4W	
R408	ERDS2TJ223T	22K	1/4W	
R411	ERDS2TJ392T	3.9K	1/4W	
R412	ERDS2TJ392T	3.9K	1/4W	
R413	ERDS2TJ102T	1K	1/4W	
R414	ERDS2TJ102T	1K	1/4W	
R415	ERDS2TJ471T	470	1/4W	
R416	ERDS2TJ471T	470	1/4W	
R419	ERDS2TJ102T	1K	1/4W	
R420	ERDS2TJ102T	1K	1/4W	
R421	ERDS2TJ151T	150	1/4W	
R422	ERDS2TJ151T	150	1/4W	
R423	ERDS2TJ102T	1K	1/4W	
R424	ERDS2TJ102T	1K	1/4W	
R425	ERDS2TJ105T	1M	1/4W	
R426	ERDS2TJ105T	1M	1/4W	
R427	ERDS2TJ105T	1M	1/4W	
R428	ERDS2TJ105T	1M	1/4W	
R432	ERDS2TJ473T	47K	1/4W	
R435	ERDS2TJ152T	1.5K	1/4W	
R436	ERDS2TJ152T	1.5K	1/4W	
R437	ERDS2TJ225T	2.2M	1/4W	
R438	ERDS2TJ225T	2.2M	1/4W	
R439	ERDS2TJ225T	2.2M	1/4W	
R440	ERDS2TJ225T	2.2M	1/4W	
R441	ERDS2TJ102T	1K	1/4W	
R442	ERDS2TJ102T	1K	1/4W	
R443	ERDS2TJ101T	100	1/4W	
R444	ERDS2TJ101T	100	1/4W	
R501	ERDS2TJ102T	1K	1/4W	
R502	ERDS2TJ102T	1K	1/4W	
R503	ERDS2TJ332T	3.3K	1/4W	
R504	ERDS2TJ332T	3.3K	1/4W	
R505	ERDS2TJ104T	100K	1/4W	
R506	ERDS2TJ104T	100K	1/4W	
R507	ERDS2TJ104T	100K	1/4W	
R508	ERDS2TJ104T	100K	1/4W	
R509	ERD25FVJ470T	47	1/4W	
R510	ERDS1FVJ222T	2.2K	1/2W	⚠
R511	ERDS2TJ563T	56K	1/4W	
R512	ERDS2TJ103T	10K	1/4W	
R513	ERD25FVJ820T	82	1/4W	
R514	ERDS2TJ221T	220	1/4W	
R515	ERDS1FVJ100T	10	1/2W	⚠
R516	ERDS1FVJ100T	10	1/2W	⚠
R517	ERDS2TJ100T	10	1/4W	
R518	ERDS2TJ100T	10	1/4W	
R519	ERDS2TJ334T	330K	1/4W	
R520	ERDS2TJ820T	82	1/4W	
R521	ERDS1FVJ330T	33	1/2W	⚠
R522	ERDS1FVJ330T	33	1/2W	⚠
R523	ERDS1FVJ272T	2.7K	1/2W	⚠
R524	ERDS1FVJ330T	33	1/2W	⚠
R525	ERDS2TJ103T	10K	1/4W	
R526	ERDS2TJ151T	150	1/4W	⚠
R527	ERDS1FVJ182T	1.8K	1/2W	⚠
R529	ERDS2TJ151T	150	1/4W	
R530	ERDS1FVJ332T	3.3K	1/2W	⚠
R531	ERDS2TJ103T	10K	1/4W	
R533	ERDS1FVJ330T	33	1/2W	⚠
R534	ERDS1FVJ820T	82	1/2W	⚠
R535	ERDS1FVJ820T	82	1/2W	⚠
R536	ERDS1FVJ820T	82	1/2W	⚠
R538	ERDS2TJ151T	150	1/4W	
R539	ERDS2TJ332T	3.3K	1/4W	
R540	ERDS2TJ820T	82	1/4W	
R541	ERDS2TJ820T	82	1/4W	
R542	ERDS2TJ820T	82	1/4W	
R543	ERDS2TJ820T	82	1/4W	
R545	ERDS1FVJ4R7T	4.7	1/2W	
R546	ERDS1FVJ4R7T	4.7	1/2W	
R548	ERDS2TJ102T	1K	1/4W	
R549	ERDS2TJ151T	150	1/4W	
R550	ERDS2TJ681T	680	1/4W	
R551	ERDS1FVJ330T	33	1/2W	⚠
R552	ERDS1FVJ330T	33	1/2W	⚠
R554	ERDS2TJ471T	470	1/4W	
R555	ERDS2TJ152T	1.5K	1/4W	
R556	ERD2FCVJ4R7T	4.7	1/4W	
R557	ERDS1FVJ390T	39	1/2W	⚠
R559	ERDS1FVJ3R3T	3.3	1/2W	⚠
R561	ERD2FCVG220T	22	1/4W	⚠
R562	ERDS2TJ151T	150	1/4W	
R563	ERDS2TJ823T	82K	1/4W	
R564	ERDS2TJ124T	120K	1/4W	
R565	ERDS2TJ563T	56K	1/4W	
R601	ERDS2TJ101T	100	1/4W	
R602	ERDS2TJ101T	100	1/4W	
R603	ERDS2TJ104T	100K	1/4W	
R604	ERDS2TJ561T	560	1/4W	
R605	ERDS2TJ104T	100K	1/4W	
R607	ERDS2TJ473T	47K	1/4W	
R608	ERDS2TJ473T	47K	1/4W	
R611	ERDS2TJ104T	100K	1/4W	
R612	ERDS2TJ102T	1K	1/4W	
R613	ERDS2TJ102T	1K	1/4W	
R614	ERDS2TJ102T	1K	1/4W	
R615	ERDS2TJ102T	1K	1/4W	
R616	ERDS2TJ102T	1K	1/4W	
R617	ERDS2TJ102T	1K	1/4W	
R618	ERDS2TJ102T	1K	1/4W	
R619	ERDS2TJ104T	100K	1/4W	
R620	ERDS2TJ104T	100K	1/4W	
R621	ERDS2TJ104T	100K	1/4W	
R622	ERDS2TJ104T	100K	1/4W	
R623	ERDS2TJ472T	4.7K	1/4W	
R624	ERDS2TJ472T	4.7K	1/4W	
R625	ERDS2TJ681T	680	1/4W	
R626	ERDS2TJ334T	330K	1/4W	
R627	ERDS2TJ333T	33K	1/4W	
R628	ERDS2TJ333T	33K	1/4W	
R629	ERDS2TJ182T	1.8K	1/4W	
R630	ERDS2TJ182T	1.8K	1/4W	
R631	ERDS2TJ334T	330K	1/4W	
R632	ERDS2TJ184T	180K	1/4W	
R633	ERDS2TJ563T	56K	1/4W	
R634	ERDS2TJ393T	39K	1/4W	
R635	ERDS2TJ153T	15K	1/4W	
R636	ERDS2TJ103T	10K	1/4W	
R637	ERDS2TJ823T	82K	1/4W	

Ref. No.	Part No.	Values & Remarks
R638	ERDS2TJ563T	56K 1/4W
R639	ERDS2TJ182T	1.8K 1/4W
R640	ERDS2TJ182T	1.8K 1/4W
R641	ERDS2TJ333T	33K 1/4W
R642	ERDS2TJ333T	33K 1/4W
R643	ERDS2TJ103T	10K 1/4W
R644	ERDS2TJ472T	4.7K 1/4W
R645	ERDS2TJ106T	10M 1/4W
R646	ERDS2TJ820T	82 1/4W
R647	ERDS2TJ104T	100K 1/4W
R648	ERDS2TJ104T	100K 1/4W
R649	ERDS2TJ102T	1K 1/4W
R650	ERDS2TJ102T	1K 1/4W
R651	ERDS2TJ102T	1K 1/4W
R652	ERDS2TJ331T	330 1/4W
R653	ERDS2TJ472T	4.7K 1/4W
R655	ERDS2TJ104T	100K 1/4W
R656	ERDS2TJ104T	100K 1/4W
R660	ERDS2TJ184T	180K 1/4W
R661	ERDS2TJ682T	6.8K 1/4W
R662	ERDS2TJ682T	6.8K 1/4W
R663	ERDS2TJ182T	1.8K 1/4W
R664	ERDS2TJ182T	1.8K 1/4W
R665	ERDS2TJ123T	12K 1/4W
R666	ERDS2TJ123T	12K 1/4W
R667	ERDS2TJ122T	1.2K 1/4W
R668	ERDS2TJ271T	270 1/4W
R669	ERDS2TJ123T	12K 1/4W
R670	ERDS2TJ102T	1K 1/4W
R671	ERDS2TJ820T	82 1/4W
R672	ERDS2TJ820T	82 1/4W
R673	ERDS2TJ820T	82 1/4W
R674	ERDS2TJ820T	82 1/4W
R675	ERDS2TJ820T	82 1/4W
R676	ERDS2TJ820T	82 1/4W
R677	ERDS2TJ820T	82 1/4W
R678	ERDS2TJ820T	82 1/4W
R679	ERDS2TJ102T	1K 1/4W
R680	ERDS2TJ104T	100K 1/4W
R681	ERDS2TJ104T	100K 1/4W
R682	ERDS2TJ104T	100K 1/4W
R683	ERDS2TJ104T	100K 1/4W
R684	ERDS2TJ104T	100K 1/4W
R685	ERDS2TJ104T	100K 1/4W
R686	ERDS2TJ103T	10K 1/4W
R687	ERDS2TJ102T	1K 1/4W
R688	ERDS2TJ102T	1K 1/4W
R689	ERDS2TJ104T	100K 1/4W
R690	ERDS2TJ104T	100K 1/4W
R691	ERDS2TJ104T	100K 1/4W
R692	ERDS2TJ104T	100K 1/4W
R693	ERDS2TJ104T	100K 1/4W
R694	ERDS2TJ104T	100K 1/4W
R695	ERDS2TJ104T	100K 1/4W

Ref. No.	Part No.	Values & Remarks
R696	ERDS2TJ104T	100K 1/4W
R697	ERDS2TJ103T	10K 1/4W
R698	ERDS2TJ104T	100K 1/4W
		CAPACITORS
C101	ECBT1H821KB5	820P 50V
C102	ECBT1H821KB5	820P 50V
C104	ECFR1C223MR	0.022 16V
C105	ECBT1H471KB5	470P 50V
C106	ECBT1H471KB5	470P 50V
C108	ECEA1AU330B	33 10V
C109	ECEA1AU101B	100 10V
C110	ECFR1E104ZF5	0.1 25V
C111	ECBT1H331KB5	330P 50V
C112	ECBT1H331KB5	330P 50V
C113	ECEA0JU221B	220 6.3V
C114	ECEA0JU221B	220 6.3V
C115	ECFR1C333JR	0.033 16V
C116	ECFR1C333JR	0.033 16V
C117	ECEA1HKA010B	1 50V
C118	ECEA1HKA010B	1 50V
C119	ECEA1EU4R7B	4.7 25V
C120	ECEA1EU4R7B	4.7 25V
C121	ECEA1HKA010B	1 50V
C122	ECEA1HKA010B	1 50V
C123	ECBT1H102KB5	1000P 50V
C124	ECBT1H102KB5	1000P 50V
C125	ECFR1C473MR	0.047 16V
C126	ECFR1C473MR	0.047 16V
C127	ECBT1C332MR5	3300P 16V
C128	ECBT1C332MR5	3300P 16V
C129	ECBT1H151KB5	150P 50V
C130	ECBT1H151KB5	150P 50V
C131	ECBT1H221KB5	220P 50V
C132	ECBT1H221KB5	220P 50V
C133	ECEA1HKS010B	1 50V
C134	ECEA1HKA010B	1 50V
C137	ECFR1C183KR	0.018 16V
C138	ECFR1C183KR	0.018 16V
C139	ECEA1HU2R2B	2.2 50V
C140	ECEA1CKA100B	10 16V
C141	ECEA1HU0R1B	0.1 50V
C142	ECFR1C223MR	0.022 16V
C143	ECEA1HKA010B	1 50V
C144	ECEA1HKA010B	1 50V
C145	ECEA1CKA100B	10 16V
C146	ECEA1CKA100B	10 16V
C150	ECEA1AU470B	47 10V
C151	ECEA1HKA010B	1 50V
C152	ECEA1HKA010B	1 50V
C153	ECBT1H102KB5	1000P 50V
C154	ECBT1H102KB5	1000P 50V
C155	ECEA1CKA100B	10 16V

Ref. No.	Part No.	Values & Remarks
C156	ECEA1CKA100B	10 16V
C157	ECBT1H681KB5	680P 50V
C158	ECBT1H681KB5	680P 50V
C159	ECBT1C682KR5	6800P 16V
C160	ECBT1C682KR5	6800P 16V
C161	ECEA1CU101B	100 16V
C162	ECEA0JU471B	470 6.3V
C163	ECEA1HKA010B	1 50V
C164	ECEA1HKA010B	1 50V
C165	ECEA1CKA100B	10 16V
C166	ECEA1CKA100B	10 16V
C167	ECEA50ZR68B	0.68 50V
C168	ECEA50ZR68B	0.68 50V
C169	ECEA1EU4R7B	4.7 25V
C170	ECEA1EU4R7B	4.7 25V
C171	ECEA1CKA100B	10 16V
C172	ECEA1CU220B	22 16V
C173	ECBT1C103MS5	0.01 16V
C174	ECEA1EU4R7B	4.7 25V
C175	ECEA1CU101B	100 16V
C176	ECQV1H473JZ3	0.047 50V
C177	ECBT1H102KB5	1000P 50V
C178	ECBT1H102KB5	1000P 50V
C179	ECBT1C103MS5	0.01 16V
C180	ECFR1C103MR	0.01 16V
C181	ECBT1C103MS5	0.01 16V
C182	ECEA1EU4R7B	4.7 25V
C183	ECQV1H474JZ3	0.47 50V
C184	ECQP1152JZ	1500P 100V
C185	ECQP1472JZT	4700P 100V
C186	ECEA1AU470B	47 10V
C187	ECBT1H471KB5	470P 50V
C188	ECBT1H471KB5	470P 50V
C189	ECQP1272JZ	2700P 100V
C190	ECBT1C103MS5	0.01 16V
C201	ECEA1CU101B	100 16V
C202	ECFR1E104ZF5	0.1 25V
C302	ECBT1E103ZF5	0.01 25V
C303	ECBT1E103ZF5	0.01 25V
C305	ECBT1C682KR5	6800P 16V
C306	ECBT1C682KR5	6800P 16V
C307	ECBT1C222KR5	2200P 16V
C308	ECBT1C222KR5	2200P 16V
C309	ECFR1C223KR	0.022 16V
C310	ECFR1C223KR	0.022 16V
C311	ECBT1C682KR5	6800P 16V
C312	ECBT1C682KR5	6800P 16V
C313	ECEA1HKA0R1B	0.1 50V
C314	ECEA1HKA0R1B	0.1 50V
C315	ECFR1C333KR	0.033 16V
C316	ECFR1C333KR	0.033 16V
C317	ECEA1HKR15B	0.15 50V
C318	ECEA1HKR15B	0.15 50V
C319	ECFR1C823MR	0.082 16V

Ref. No.	Part No.	Values & Remarks
C320	ECFR1C823MR	0.082 16V
C321	ECBT1E103ZF5	0.01 25V
C322	ECBT1H102KB5	1000P 50V
C323	ECBT1H101KB5	100P 50V
C324	ECEA1AU471B	470 10V
C325	ECEA1CKA100B	10 16V
C326	ECEA1CKA100B	10 16V
C327	ECBT1C152MR5	1500P 16V
C328	ECBT1C152MR5	1500P 16V
C329	ECBT1H681KB5	680P 50V
C330	ECBT1H681KB5	680P 50V
C331	ECEA1HKAR47B	0.47 50V
C332	ECEA1HKAR47B	0.47 50V
C333	ECEA1HKAR22B	0.22 50V
C334	ECEA1HKAR22B	0.22 50V
C335	ECFR1C123KR	0.012 16V
C336	ECFR1C123KR	0.012 16V
C337	ECEA1HKA2R2B	2.2 50V
C338	ECEA1HKA2R2B	2.2 50V
C339	ECEA1CKA100B	10 16V
C340	ECEA1CKA100B	10 16V
C341	ECBT1H820KB5	82P 50V
C342	ECBT1H820KB5	82P 50V
C343	ECBT1H102KB5	1000P 50V
C344	ECBT1H102KB5	1000P 50V
C347	ECBT1H101KB5	100P 50V
C348	ECBT1H101KB5	100P 50V
C349	ECBT1H101KB5	100P 50V
C350	ECBT1H101KB5	100P 50V
C351	ECEA1HKA010B	1 50V
C352	ECEA1HKA010B	1 50V
C353	ECEA1HKA010B	1 50V
C354	ECEA1HKA010B	1 50V
C355	ECEA1CKA100B	10 16V
C356	ECEA1CKA100B	10 16V
C357	ECBT1H391KB5	390P 50V
C358	ECBT1H391KB5	390P 50V
C359	ECEA0JKA101B	100 6.3V
C360	ECEA0JKA101B	100 6.3V
C361	ECBT1H271KB5	270P 50V
C362	ECBT1H271KB5	270P 50V
C363	ECEA1HKAR47B	0.47 50V
C364	ECEA1HKAR47B	0.47 50V
C365	ECFR1C823MR	0.082 16V
C366	ECBT1C472KR5	4700P 16V
C367	ECEA1CN100SB	10 16V
C368	ECFR1C223KR	0.022 16V
C369	ECEA1HKA010B	1 50V
C370	ECEA1CKA101B	100 16V
C371	ECEA1HKA4R7B	4.7 50V
C372	ECEA1CKA100B	10 16V
C375	ECBT1H470J5	47P 50V
C376	ECBT1H470J5	47P 50V
C377	ECBT1H470J5	47P 50V

Ref. No.	Part No.	Values & Remarks
C378	ECBT1E103ZF5	0.01 25V
C379	ECBT1E103ZF5	0.01 25V
C380	ECEA1CKA100B	10 16V
C381	ECFR1C473KR	0.047 16V
C389	ECBT1E103ZF5	0.01 25V
C390	ECEA1CKA100B	10 16V
C391	ECEA1AKA101B	100 10V
C392	ECEA1HKA2R2B	2.2 50V
C393	ECEA1HKAR68B	0.68 50V
C394	ECEA1HKAR68B	0.68 50V
C395	ECEA1HKAR68B	0.68 50V
C396	ECEA1HKAR68B	0.68 50V
C399	ECEA1HKA4R7B	4.7 50V
C400	ECEA1HKA4R7B	4.7 50V
C401	ECEA1HKA4R7B	4.7 50V
C402	ECEA1HKA4R7B	4.7 50V
C403	ECBT1C332KR5	3300P 16V
C404	ECBT1C332KR5	3300P 16V
C405	ECEA1CKA100B	10 16V
C406	ECEA1CKA100B	10 16V
C410	ECEA1HKA010B	1 50V
C411	ECEA1CKA100B	10 16V
C412	ECEA1CKA100B	10 16V
C421	ECBT1H101KB5	100P 50V
C422	ECBT1H101KB5	100P 50V
C423	ECBT1H181KB5	180P 50V
C424	ECBT1H181KB5	180P 50V
C501	ECEA1HKA0R1B	0.1 50V
C502	ECEA1HKA0R1B	0.1 50V
C503	ECBT1H331KB5	330P 50V
C504	ECBT1H331KB5	330P 50V
C505	ECBT1H821KB5	820P 50V
C506	ECBT1H821KB5	820P 50V
C507	ECBT1H150J5	15P 50V
C508	ECBT1H150J5	15P 50V
C509	ECEA1HU330B	33 50V
C510	ECEA2AU100B	10 100V
C511	ECKR1H473ZF5	0.047 50V
C512	ECKR1H473ZF5	0.047 50V
C513	ECEA1HKA010B	1 50V
C514	ECEA1HKA010B	1 50V
C516	ECKR1H103ZF5	0.01 50V ⚠
C517	ECKR1H103ZF5	0.01 50V ⚠
C518	ECKR1H103ZF5	0.01 50V ⚠
C519	ECKR1H103ZF5	0.01 50V ⚠
C520	ECEA1CU470B	47 16V
C521	ECEA1CU221B	220 16V
C523	ECEA0JKA101B	100 6.3V
C524	ECKR1H103ZF5	0.01 50V
C525	ECKR1H103ZF5	0.01 50V
C526	ECEA1HKA220B	22 50V
C528	ECEA1AKA470B	47 10V
C529	ECKR1H103ZF5	0.01 50V
C530	ECEA1HU102E	1000 50V ⚠

Ref. No.	Part No.	Values & Remarks
C531	ECKR1H103ZF5	0.01 50V ⚠
C532	ECEA0JU101B	100 6.3V
C533	ECKR1H103ZF5	0.01 50V ⚠
C535	ECEA1CU101B	100 16V ⚠
C536	ECKR1H103ZF5	0.01 50V ⚠
C537	ECEA1CKA101B	100 16V ⚠
C538	ECKR1H103ZF5	0.01 50V ⚠
C539	ECKR1H103ZF5	0.01 50V
C540	ECKR1H103ZF5	0.01 50V(EG)
C541	ECEA1HU332UE	3300 50V
C542	ECEA1HU332UE	3300 50V
C543	ECKR1H103ZF5	0.01 50V(EG)
C544	ECKR1H103ZF5	0.01 50V(EG)
C547	ECEA1HKA220B	22 50V
C548	ECKR1H103ZF5	0.01 50V
C549	ECEA1HU101B	100 50V
C550	ECQE1224KZ	0.22 100V
C551	ECBT1H101KB5	100P 50V(EG)
C552	ECBT1H101KB5	100P 50V(EG)
C553	ECKR1H103ZF5	0.01 50V(E,EB,GN)
C553	ECKR1H223ZF5	0.022 50V(EG)
C554	ECKR1H103ZF5	0.01 50V(E,EB,GN)
C554	ECKR1H223ZF5	0.022 50V(EG)
C555	ECBT1H101KB5	100P 50V(EG)
C556	ECBT1H101KB5	100P 50V(EG)
C557	ECBT1H101KB5	100P 50V(EG)
C559	ECBT1C103MS5	0.01 16V(EG)
C561	ECBT1H101KB5	100P 50V(EG)
C562	ECBT1H101KB5	100P 50V(EG)
C601	ECEA1HKS3R3B	3.3 50V
C602	ECEA1HKS3R3B	3.3 50V
C603	ECEA1HKS010B	1 50V
C604	ECEA0JKA101B	100 6.3V
C605	ECBT1H102KB5	1000P 50V
C606	ECBT1H561KB5	560P 50V
C607	ECBT1H561KB5	560P 50V
C608	ECBT1H561KB5	560P 50V
C609	ECEA0JKS470B	47 6.3V
C610	ECEA0JU102B	1000 6.3V
C611	ECBT1H102KB5	1000P 50V
C612	ECEA0JU102B	1000 6.3V
C613	ECEA1AKA220B	22 10V
C614	ECBT1C103MS5	0.01 16V
C617	ECBT1C103MS5	0.01 16V
C619	ECBT1H102KB5	1000P 50V
C620	ECBT1H102KB5	1000P 50V
C621	ECBT1H680J5	68P 50V
C622	ECBT1H680J5	68P 50V
C623	ECBT1H560J5	56P 50V
C624	ECBT1H560J5	56P 50V
C625	ECBT1H220JC5	22P 50V
C626	ECBT1H180JC5	18P 50V
C627	ECEA1HKA2R2B	2.2 50V
C628	ECEA1HKA2R2B	2.2 50V

Ref. No.	Part No.	Values & Remarks
C629	ECFR1C183KR	0.018 16V
C630	ECBT1C562KR5	5600P 16V
C631	ECFR1C183KR	0.018 16V
C632	ECBT1C562KR5	5600P 16V
C633	ECBT1C182KR5	1800P 16V
C634	ECBT1H561KB5	560P 50V
C635	ECBT1C182KR5	1800P 16V
C636	ECBT1H561KB5	560P 50V

Ref. No.	Part No.	Valucs & Remarks
C637	ECEA1HKA2R2B	2.2 50V
C638	ECEA1HKA2R2B	2.2 50V
C639	ECBT0J223NS5	0.022 6.3V
C640	ECEA1HKSR22B	0.22 50V
C641	ECBT1C103MS5	0.01 16V
C642	ECBT1H101KB5	100P 50V
C643	ECBT1H101KB5	100P 50V
C644	ECEA1HKSR33B	0.33 50V

Ref. No.	Part No.	Values & Remarks
C645	ECBT1H220JC5	22P 50V
C646	ECBT1H220JC5	22P 50V
C647	ECBT1H220J5	22P 50V
C651	ECBT1H331KB5	330P 50V
C652	ECBT1H331KB5	330P 50V
C951	ECBT1H101KB5	100P 50V
C971	ECBT1H101KB5	100P 50V

■ PACKING MATERIALS & ACCESSORIES

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area)
Parts without these indications can be used for all areas.
* The "(SF)" mark denotes the standard part.
* Remote Control Unit :
Supply period for three years from terminal of production.
* [M] Indicates in the Remarks columns indicates parts supplied by **MESA.**

Ref No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPG1937	GIFT BOX	[M] (E, EG)
P1	RPG1938	GIFT BOX	[M] (GN)
P1	RPG1941	GIFT BOX	[M] (EB)
P2	SPSD155	ACCESSORY CASE	
P3	RPF0100	BAG (SET)	[M]
P4	RPN0761	POLYFOAM	[M]
P5	XZB24X33C04	VINYL BAG	
		ACCESSORIES	
A1	EUR642181	REMOTE CONTROL UNIT	[M]
A2	RJA0019-2K	AC CORD	(SF) (E, EG) ⚠
A2	RJA0036-K	AC CORD	(GN) ⚠
A2	VJA0733	AC CORD	(SF) (EB) ⚠
A4	RQCB0169	SERVICE CENTER LIST	
A6	RFKSUCH80EK	INSTR MANUAL ASS'Y	[M] (E)
A6	RQT2265-E	INSTRUCTION MANUAL	[M] (EG)
A6	RQT2266-B	INSTRUCTION MANUAL	[M] (EB, GN)
A7	SLA9Z5T	LOOP ANT	[M]
A8	SSA270	FM ANT	(E, EB, EG)
A8	SSA272	FM ANT	[M] (GN)
A9	REX0581	BUS CABLE	[M]
A10	XTN3+12AFZ	SCREW	
A11	RMN0244	ANT HOLDER	
A12	SJP9009	ATTACHMENT PLUG	(EB)

Ref No.	Part No.	Part Name & Description	Remarks